UMASS/AMHERST
312066 0281 6058 8

Digitized by the Internet Archive
in 2014

https://archive.org/details/annualplanningre9789mass

MASS. MA20.27: W0/978-981

ANNUAL PLANNING REPORT FISCAL YEAR 1978

MASSACHUSETTS DIVISION OF EMPLOYMENT SECURITY JOHN D. CROSIER DIRECTOR
AFFILIATED WITH EMPLOYMENT AND TRAINING ADMINISTRATION U.S. DEPARTMENT OF LABOR

U OF MASS/AMHERST LIBRARY

WORCESTER LMA

GOVERNMENT DOCUMENTS
COLLECTION
MAY 31 197

JOB SERVICE

ANNUAL PLANNING REPORT

FISCAL YEAR 1978

WORCESTER, MASSACHUSETTS

LABOR MARKET AREA

AND

CETA PRIME SPONSOR CONSORTIUM

Prepared by: Kenneth R. Volkman
Senior Labor Market Economist
Labor Area Research Department
Massachusetts Division of
Employment Security
Charles F. Hurley Building
Government Center
Boston, Massachusetts 02114

TABLE OF CONTENTS

Page

I. Highlights and Conclusions. 1

II. Description of Area
   a. Definition of Area. 3
   b. Economic Developments and Outlook 3
   c. Population and Labor Force Characteristics and Trends 5

III. Employment Developments and Outlook by Industry
   a. Industries in the Worcester Economy 8
   b. Employment Developments in 1976 10
   c. Industry Growth through Fiscal Year 1978. 10
   d. Employment in 1985. 16

IV. Employment Developments and Outlook by Occupation
   a. Available Jobs. 20
   b. Job Prospects for Graduates 26

V. Recent Unemployment Trends and Outlook. 29

VI. Individuals in Need of Manpower Services
   a. Barriers to Employment. 36
   b. Needs for Employment Related Assistance 38

VII. Labor Supply/Demand Imbalance 42

VIII. Training Programs 53

MAPS, TABLES AND GRAPHS(Continued)

SOURCES OF INFORMATION

1. Mass. Division of Employment Security
   Labor Area Research Department
   Employment and Unemployment Estimates

2. Mass. DES Occupation/Industry Research Department
   Industry and Occupational Projections

3. Population and Labor Force Breakdowns from
   1970 Census and 1976 Projections
   Lawrence Berkely Laboratory, Univ. of California
   and U.S. Department of Labor, Employment and
   Training Administration

4. Mass. DES - Statistics Department
   ESARS Breakouts of Job Applicants and Openings
   Registered with DES

5. Data Resources Inc.
   Graph II

6. Worcester Manpower Consortium
   Outline of CETA Training Courses

7. Worcester Telegram and Gazette

8. Mass. DES - Local Area Offices

I. Highlights and Conclusions

In fiscal year 1978 we foresee a potential need for employment related services in the Worcester Labor Market Area for 42,085 different individuals who may be unemployed and 7,922 who will be employed only part time for economic reasons. Of these numbers, 32,781 of the unemployed and 6,102 of the part time employees will be residents of the CETA consortium area.

The calendar year 1976 saw the area begin to recover from the deep recession which had begun in 1975. After 14 consecutive months of double digit unemployment rates it finally fell below 10 percent in May.

Durable goods employment, basic to the Worcester area economy, only began to pick up in the latter part of 1976, but nondurables manufacturing and nonmanufacturing showed improvement starting in January.

By December average hourly earnings in manufacturing were 39 cents higher than the year before, and average weekly earnings up by $5.01 to surpass the $200 level and reach $203.11.

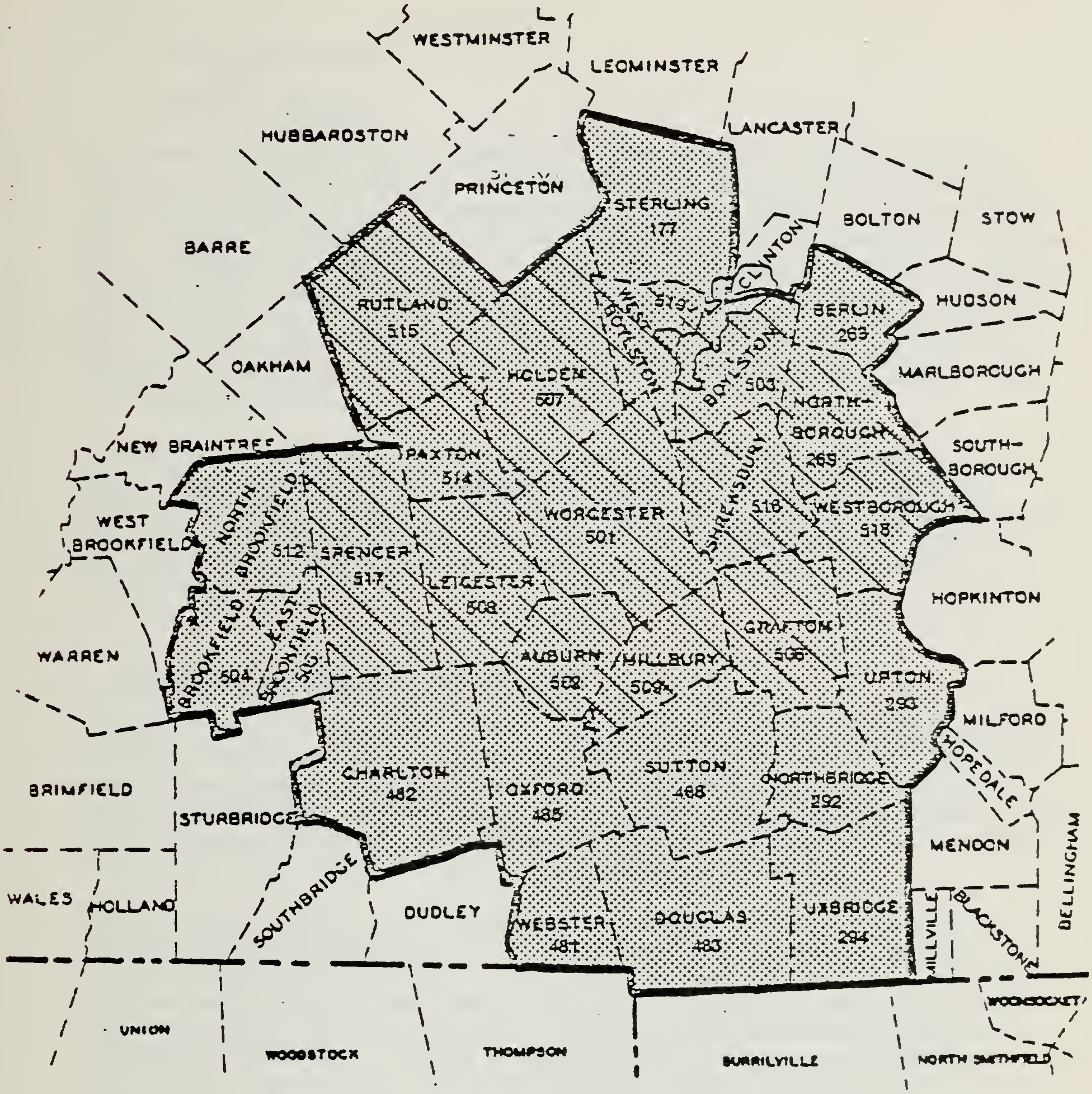
The outlook in early 1977 is favorable to continued improvement in the labor area, although this is dependent on trends in the state and nation and foreign trade. This forecast is predicated on an assumption that business plans nationally for a higher level of capital purchases will be followed through and that the federal government will pass legislation providing for business incentives and more public works appropriations. Unemployment in the labor market area should be down to 7.3 in fiscal year 1978.

The City of Worcester suffered two economic setbacks in recent months. In December the award of grants was made from the $2 billion Public Works Employment Act of 1976 and the city received none of its requested $42.5 million. Then in February 1977 the voters of the city in a referendum voted down public tax support for the proposed Civic Center.

As of October 1, 1976 Worcester was renamed for another year as a prime sponsor of the Comprehensive Employment and Training Act (CETA). Thus, their efforts will continue in the area, focused on training and making referrals of the disadvantaged.

WORCESTER LABOR AREA

and CONSORTIUM



THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

Consortium
▨
area

March 1975

II. Description of Area

a. Definition of Area

The Worcester Labor Market Area is located entirely within Worcester County in central Massachusetts. It contains only one city, Worcester, the second largest in the Commonwealth of Massachusetts, and twenty six towns. They are Auburn, Berlin, Boylston, Brookfield, Charlton, Douglas, East Brookfield, Grafton, Holden, Leicester, Millbury, Northboro, Northbridge, North Brookfield, Oxford, Paxton, Rutland, Shrewsbury, Spencer, Sterling, Sutton, Upton, Uxbridge, Webster, Westboro, and West Boylston. The population of the Labor Market Area at the time of the 1975 state census was 385,583, up 1.9 percent from the 378,289 at the time of the 1970 federal census.

The Worcester area is also the location of a CETA Prime Sponsor Consortium. Communities included are Worcester, Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Northboro, Paxton, Rutland, Shrewsbury, Spencer, Westboro, and West Boylston. The population of this consortium in 1975 was 306,620, roughly, (80 percent) that of the Labor Market Area.

b. Economic Developments and Outlook

In April 1976 the Worcester labor market area finally started to recover from the recession which hit the area and the state in 1975. In this month unemployment, for the first time in 23 months, was less than in the corresponding month of the prior year, and the unemployment rate fell to 10.1 percent, the lowest since January 1975's 9.3 percent and also the last month with a double digit unemployment rate in 1976.

In the initial stages of recovery in Massachusetts the economy of the Worcester area lagged behind that of the state as a whole, because capital goods manufacturing, which is strong in Worcester and vicinity, experiences a delayed reaction to changes in consumer demand in economic upturns as well as in downturns. Thus, for the five months period of May through October 1975, the area's unemployment rate exceeded that for the state. Then,after a rough equivalency in the following months, the percentage began to drop considerally below that for the state in the last four months of 1976.

Although the pace of improvement has been fairly steady, it has not been a strong one, and by historical standards the area is still depressed. With realization of this, governmental units in the area made application in the fall of 1976 to the Economic Development Administration for grants for public works under the Local Public Works Capital Development and Investment Program, which is Title I of the Public Works Employment Act of 1976. Although the ultimate formula used to determine the successful applicants was not made known, the basic guidelines were announced as follows: 70 percent of the funding would go to state or local governments whose average unemployment rate for the three most recent consecutive months for which information was available exceeded the average national unemployment rate for that period, with the remaining 30 percent for areas whose unemployment rates were over 6.5 percent but not more than the U.S. rate. Also, 30 percent of an applicant's ranking was based on the number of unemployed and 25 percent on the unemployment rate. The nature of the projects listed and the extent to which they would reduce construction unemployment were also factors. A title II of the Act covered unemployment rates of 4.5 percent or more and was handled nationally.

When the awards were announced in December 1976, only three towns in the LMA received grants, Upton for $1,637,750, Northboro for $547,000, and Rutland for $305,460. According to the census share method of allocating employment and unemployment, Upton has the highest unemployment rate in the LMA, but the other two towns were lower than a number of area communities.

In late November, however, five labor market area communities were notified that they would receive grants under the so-called Federal Countercyclical Assistance Program. Money went to Worcester ($592,019), Auburn ($29,063), Shrewsbury($28,555), Webster ($24,293), and Westboro ($20,642). Funds from this program must be used to prevent local tax increases, job layoffs, or cutbacks in municipal or town services which might otherwise occur because of spiraling costs.

While the economic outlook appears to be moderately favorable despite the effects of an extremely harsh winter, Congress is making as one of its top priorities in its new 1977 session an enlarged Public Employment Act with some changes in the distribution formula.

c. Population and Labor Force Characteristics and Trends

Table A

Worcester Consortium Population

	1970 Population	Estimate July 1, 1973	Projection Jan. 1, 1978	Numerical Change 1970-1978	Percent Change 1970-1978
Worcester	176,572	170,203	160,561	-16,011	- 9.1
Auburn	15,347	15,565	15,749	+ 402	+ 2.6
Boylston	2,774	3,009	3,308	+ 534	+19.3
Grafton	11,659	11,208	10,533	- 1,126	- 9.7
Holden	12,564	12,997	13,495	+ 931	+ 7.4
Leicester	9,140	9,161	9,120	- 20	- 0.2
Millbury	11,987	12,143	12,267	+ 280	+ 2.3
Northboro	9,218	10,478	12,133	+ 2,915	+31.6
Paxton	3,731	3,934	4,182	+ 451	+12.1
Rutland	3,198	3,595	4,113	+ 915	+28.6
Shrewsbury	19,196	21,233	23,876	+ 4,680	+24.4
Spencer	8,779	9,461	10,329	+ 1,550	+17.7
Westboro	12,594	14,342	16,639	+ 4,045	+32.1
West Boylston	6,369	6,531	6,786	+ 417	+ 6.5
Totals	303,128	303,860	303,091	- 37	- 0.01

Source: U.S. Department of Labor

By January 1, 1978 the Consortium is projected to show a slight decline in population due to a 16,011 drop in the city of Worcester. This more than offsets the gains of over 20 percent in the Worcester suburb of Shrewsbury (+4,680 or 24.4 percent), and two communities on the eastern border of the LMA, Northboro (+2,915 or 31.6 percent) and Westboro (+4,045 or 32.1 percent).

The Labor Market Area includes the Consortium, plus the following additional towns.

Table B

Worcester Labor Market Area Population

	1970 Population	Estimate July 1, 1973	Projection Jan. 1, 1978	Numerical Change 1970-1978	Percent Change 1970-1978
Consortium	303,128	303,660	303,091	- 37	- 0.01
Berlin	2,099	2,275	2,499	+ 400	+19.1
Brookfield	2,063	2,322	2,662	+ 599	+29.0
Charlton	4,654	5,146	5,783	+1,129	+24.3
Douglas	2,947	3,046	3,157	+ 210	+ 7.1
East Brookfield	1,800	1,955	2,155	+ 355	+19.7
Northbridge	11,795	11,855	11,847	+ 52	+ 0.4
North Brookfield	3,967	3,982	3,975	+ 8	+ 0.2
Oxford	10,345	10,673	11,045	+ 700	+ 6.8
Sterling	4,247	4,506	4,830	+ 583	+13.7
Sutton	4,590	5,148	5,878	+1,288	+28.1
Upton	3,484	3,725	4,028	+ 544	+15.6
Uxbridge	8,253	8,296	8,293	+ 40	+ 0.5
Webster	14,917	15,209	15,498	+ 581	+ 3.9
LMA Totals	378,289	381,998	384,741	+6,452	+ 1.7

Source: U.S. Department of Labor

Population in the balance of the Labor Market Area is projected to gain some in every town, but most heavily in Brookfield (+599 or 29.0 percent), Sutton (+1,288 or 28.1 percent), and in Charlton (+1,129 or 24.3 percent). While population is expected to grow by only 1.7 percent from 1970 to 1978, the labor force in the LMA will grow by 14.4 percent by FY 1978. Among whites the female growth rate will outpace the male, while with non-whites the reverse will be true.

Table C

Worcester Labor Market Area Labor Force

	Male Whites	Male Nonwhites	Female Whites	Female Nonwhites	Total
1970	96,821	953	61,615	796	160,185
1978(projected)	110,731	1,357	78,359	1,110	191,557
Numerical Gain	13,910	404	16,744	314	31,372
Percentage Gain	14.4	42.4	27.2	39.4	19.6

Source: Mass D.E.S.

Although nearly all age segments in the labor force will increase the number of white males from 35 to 44 and 65 and over will drop.

The fastest growth in both population and labor force is occurring among nonwhite and those of Spanish heritage.

Table D

Population Changes by Race

	1970	1978 Projected	Percentage Growth
White	373,294	379,185	1.6
All Nonwhite	4,863	5,476	12.6
Labor Force Changes by Race			
White	158,152	189,090	19.6
All Nonwhite	1,749	2,467	41.1

Source: U.S. Department of Labor/Mass. D.E.S.

III. Employment Developments and Outlook by Industry

a. Industries in the Worcester Economy

Table E
Annual Average Employment by Industry
for
Worcester Labor Market Area (Adjusted)*

Manufacturing Industries

SIC	Name	1970	1974	1985	Change 1974-85	Percentage Change 1974-85
	DURABLE GOODS - TOTAL	30,668	30,160	30,445	+ 235	+ 0.9
19	Ordnance	1,078	94	75	- 19	-20.2
24	Lumber	96	117	107	- 10	- 8.5
25	Furniture	1,176	814	629	- 185	-22.7
32	Stone, Clay, Glass	5,220	6,025	6,531	+ 506	+ 8.4
33	Primary Metals	5,872	5,393	4,468	- 925	-17.2
34	Fabricated Metals	6,622	6,936	7,427	+ 491	+ 7.1
35	Machinery (exc. elec.)	8,607	8,866	8,787	- 79	- 0.9
36	Electrical Equipment	1,440	1,284	1,638	+ 354	+27.6
37	Trans. Equipment	134	152	167	+ 15	+ 9.9
38	Instruments	423	479	616	+ 137	+28.6
	NONDURABLE GOODS - TOTAL	18,373	16,791	15,767	-1,024	- 6.1
20	Food	2,064	1,520	1,359	- 161	-10.6
21	Tobacco	0	0	0	0	--
22	Textiles	4,260	4,212	3,440	- 772	-18.3
23	Apparel	1,539	1,064	732	- 332	-31.2
26	Paper	1,210	1,025	876	- 149	-14.5
27	Printing	2,591	2,649	2,843	+ 194	+ 7.3
28	Chemicals	837	1,036	1,292	+ 256	+24.7
29	Petroleum	64	79	97	+ 18	+22.8
30	Rubber and Plastics	1,743	2,145	2,488	+ 343	+16.0
31	Leather	3,469	2,105	1,493	- 612	-29.1
39	Miscellaneous	596	956	1,147	+ 191	+20.1

* Adjusted to one person - one job concept

Table E
Annual Average Employment by Industry
for
Worcester Labor Market Area (Adjusted)*
(continued)

Nonmanufacturing Industries

SIC	Name	1970	1974	1985	Change 1974-85	Percentage Change 1974-85
	NONMANUFACTURING-TOTAL	97,625	104,691	120,598	+15,907	+15.2
01-09	Agriculture, Forestry, Fisheries	1,797	1,982	1,834	- 148	- 7.5
10-14	Mining	94	99	101	+ 2	+ 2.0
15-17	Construction	8,090	7,111	8,628	+ 1,517	+21.3
40-49	Transportation, Comm., Utilities	8,293	8,162	8,829	+ 667	+ 8.2
50-51	Wholesale Trade	6,937	7,744	8,710	+ 966	+12.5
52-59	Retail Trade	22,323	25,086	28,238	+ 3,152	+12.6
60-67	Finance, Insurance, Real Estate	7,457	8,426	10,325	+ 1,899	+22.5
70-89	Services	37,122	40,514	48,079	+ 7,565	+18.7
91-97	Government - Total	5,512	5,567	5,854	+ 287	+ 5.2
	Federal Public Admin.	1,745	1,804	1,763	- 41	- 2.3
	Postal Service	(1,295)	(1,291)	(1,263)	(- 28)	- 2.2
	Public Admin.	(450)	(513)	(500)	(- 13)	- 2.5
	State Public Admin.	902	763	841	+ 78	+10.2
	Local Public Admin.	2,865	3,000	3,250	+ 250	+ 8.3
	TOTAL ALL INDUSTRIES	146,666	151,642	166,810	+15,168	+10.0

---

* Adjusted to one person - one job concept

Source: Occupation/Industry Research Department - DES

b. Employment Developments in 1976

From December 1975 to December 1976 there was a moderate recovery of employment in the Worcester Labor Market Area, fairly well distributed by industry grouping. The growth of 3,200 workers was almost equally divided between manufacturing and nonmanufacturing, and in manufacturing almost equally between durable and nondurable goods.

Among durable goods, the traditional mainstay of the area's economy, gains have been greatest in fabricated metals and in such "other durable goods" industries as stone, clay, and glass, electrical machinery, and instruments. Still lagging in recovery, however, are primary metals and nonelectrical machinery, still below year-before numbers.

In the soft goods category leather employment was still at the level of December 1975, but more were working in textile and in such "other nondurable goods" industries as apparel, printing, and rubber and plastics than a year earlier.

In nonmanufacturing the overall payroll expansion of 1,700 occurred almost entirely in the two industry categories of services (+1,300) and government, state and local (+700). Contract construction and transportation, communications and utilities were still at year before levels, but wholesale and retail trade was down by 400.

c. Industry Growth Through Fiscal Year 1978

During the coming fiscal year 1978 employment overall should continue to make some gains at about the same modest pace as during calendar year 1976.

Durable Goods manufacturing will benefit from improved capital goods orders. An analysis of the prospects in each industry follows.

Primary Metals: Wire making firms, including wire fence makers, are optimistic, except for the demand for plastic coated wire. The powder metal sector, however, is still below 1974 levels in some firms with workers still on layoff. Although some gains are foreseen in 1977, one firm sees no expansion before 1978.

Fabricated Metals. The outlook for the electro-plating and ball valve sectors is good, although the introduction of new labor saving machinery has cost some jobs. With an improvement in home buying and more do-it-yourself projects to counteract inflation, the hand tool sector is also optimistic. Tool sales to the auto industry reflect that industry's gains. A producer of steam generators for industrial plants and utilities sees the continuing national recovery, the shortage of natural gas and higher oil prices as contributing to increased demand, especially for coal boilers. Late in the year 1976, a fabricated wire products maker added a second shift, and a screw machine firm a third shift, to serve increasing demands. A heavy stampings concern believes his volume of business may warrant some hiring in the first quarter of 1977. Improvement will be slower in forgings, however, with one large firm in early 1977 still having 150 on layoff from the 1975 recession. In the late fall of 1976, Worcester saw a large fasteners producer move its manufacturing operation to New Hampshire.

Nonelectrical Machinery. Prospects in this manufacturing industry, the largest in the labor market area, are generally good. A maker of machines for steel wire and plastics sees a sales gain of 20 percent in 1977. Another machinery manufacturer finds growing demand from auto manufacturers for its automated grinding machines and has high hopes for a new grinding-up machine introduced in the fall of 1976. A firm making turbines and blowers for naval vessels expects to add to its forces in the first half of 1977. Foreign demand is helping the fabricator of air cleanup systems, and a maker of turbines for the petrochemical industry. A growing export market is also the sales target of a newly introduced textile printing machine. Some other textile machinery lines such as carding machines are in great demand, also. A rolled thread and die firm expects the pickup in business in the last six months of 1976 to continue into 1977 with some hiring probable. A big textile machinery manufacturer is bullish on its new line of graphic art duplicating machines, the success of which would require a considerable amount of hiring. Some other kinds of nonelectrical machinery show few signs of any great change in demand in the foreseeable future. These include paper making machines, mining machines, a type of machine which puts labels on containers, and ventilators, magnetic tools, and some metal cutting tools.

The most pessimistic outlook is held by a steel mill manufacturer, who depends to a considerable extent on exports, and to a fabricator of ventilation systems for marine industry and mechanical drive steam turbines, who predicts a 10-15 percent sales drop in 1977. Two firms in this industry announced closing plans around the first of 1977, one a maker of plastics extrusion machinery, which will close by the end of February 1977 and the other a maker of spinning ring textile machinery, which will close and move south by the spring of 1977.

Electrical Machinery This industry ended 1976 with a good showing. One of the larger firms expects to add up to 50 workers in its semi-conductor division. The new hires will comprise both technicians and production workers to meet greater demand from the entertainment electronics sector, automotive electronics, the photographic sector, and the digital computer, peripheral and calculator fields. Another firm which has a large export demand for its display terminals is planning some expansion. A micro-circuit manufacturer is constructing a new building, which, upon completion early in 1977, will require 30 to 40 more personnel.

Instruments Although not a large factor in the area, this industry is maintaining an even keel. One diversified firm makes evaporators and chemical compounds used in research by the Environmental Protection Agency, pharmaceutical companies, and research laboratories.

Stone, Clay and Glass The grinding wheel and abrasives sector of this industry finished recalling its workers laid off during the 1975 recession by the end of the third quarter of 1976 and has continued with new hirings into 1977. Development of a new abrasive in 1976 has added to the company's growth potential.

A fiber optics firm is building a new production addition which will be operational by March 1977 and require from 25 to 35 more employees within three years. Their products enters into telecommunications, medical instruments, computers, and missile systems.

A maker of precast concrete products is largely dependent on road construction for such an item as median barriers. Increased building construction through fiscal year 1978 should boost another firm, which makes architectural glass products.

In the nondurable goods manufacturing sector, employment in the short run should be fairly steady, but growth will be slow.

The food industry has been in a declining trend for some time, but a major firm in November opened a new bakery and distribution center, producing at only 30 to 50 percent capacity at its inception, but with an ultimate employment total of 300 predicted. Additional employment gains will occur if another bakery goes ahead with plans for a second and third shift.

Most textile firms forsee just steady employment, but one yarn maker sees a good first half in 1977 and a printed fabrics producer has noted a good reception of some new print patterns.

Apparel has been declining in the area, but one men's and boys' clothing manufacturer is doing very well, and a fabricator of a line of packaging products has recently added to his plant in anticipation of government orders.

Paper industry prospects are mildly optimistic, despite some underlying concerns. Thus the several envelope firms in the area see a fairly good 1977, despite the adverse effect of postage rate increases on sellers by mail and greeting card manufacturers. A corrugated carton manufacturer had to add a third shift in the summer of 1976, despite their fears of adverse effects from the bottle bill which was on the November ballot, but was defeated.

The printing industry saw some cutbacks in 1976, but several firms installed new equipment which will help business, although some attrition of employees may result. A publication printer saw 1976 sales double those for 1975 and plans additional plant facilities and possibly new equipment in 1977. The printing of packages is a strong item for another company.

The several chemical firms have no great expectation of change in their business.

Within the rubber and plastics industry, rubber companies are the smaller segment and have fairly good prospects for 1977. The plastics segment is diverse, with its toy and specialty manufacturers having a seasonal pattern which causes considerable fluctuations in employment. A firm which makes polyethylene packaging is moving into the Worcester LMA early in 1977 to a plant where they can double their output.

In the leather industry, many of the firms are hard pressed by imports. At least one firm, however, which makes welts was operating three shifts at the end of 1976 and looked forward to steady employment through the first half of 1977.

In the nonmanufacturing field one area bank sees a jump in housing in 1977, in contrast with 1976 when building permits were down by over 25 percent. The Worcester Housing Authority will complete by June of 1977 the last of the HUD funded apartment projects, and, barring new federal programs or funding will just do modernization work during the year. The biggest potential construction project was the Worcester Civic Center calling for a civic arena and a new hotel, but the defeat of tax support for it in a referendum will probably doom it.

In the transportation, communications, and utility industry there are some question marks. The possible reassigning of the Worcester school bus contract could affect employment, for example. If an Airport Industrial Park is developed, this would be inviting for firms using air freight extensively. Utility's work rolls have been reduced by cutbacks at the end of 1976 at an electric utility because electrical use has been retrogressing for the last two years. The telephone company also has laid off workers after completion of some toll long lines connections and the loss of a few telephone accounts.

In the trade sector, wholesale business in such areas as steel and electrical equipment has shown some improvement in tandem with generally improved business conditions. Some growth in retail trade work rolls should come in downtown Worcester when the Mid-Town Mall is completely rented and in Westboro when a new shopping center, now under construction, opens up.

In finance, insurance and real estate employment is generally stable, except for seasonal fluctuations in real estate. However in February 1977 one of the principal banks in Worcester announced coming layoffs of up to 36 persons because of lower earnings. Also, a major insurance company has been reducing employment slightly, mainly through attrition, as the use of computers has eliminated some personnel needs.

In the broad service industry employment will undoubtedly continue its long-term growth pattern. One firm which provides controls for petroleum, food processing and chemical plants sees good prospects ahead. A data processing company started a second shift in November 1976 and is now considering a third shift, and reports a continuous need for key punch operators. A big potential for expansion also exists at the University of Massachusetts Medical School where the contemplated expansion would require up to 240 more slots. However, there continues to be a freeze on filling these slots by the state.

d. Employment in 1985

Long range projections have been developed for the year 1985 for employment by industry, adjusted to a labor force basis. For hard goods manufacturing they see the largest numerical gain (503) as occurring in stone, clay, and glass, with the second greatest (491) in fabricated metals. The largest percentage increases, however, are anticipated in instruments (+28.6 percent or 137 persons) and in electrical equipment (+27.6 percent or 354 persons). The biggest decline is expected to be in primary metals (-925), with the largest percentage drop in furniture (-22.7 percent or 185 workers).

Table G

Worcester Labor Market Area Employment

	Employment Record		Employment Projections	
	Fiscal Year 1975	Fiscal Year 1976	Fiscal Year 1977	Fiscal Year 1978
Employment	166,850	168,442	173,716	177,556
Unemployment	18,892	19,208	14,085	14,001
Labor Force	185,742	187,650	187,801	191,557
Unemployment Rate	10.2	10.2	7.5	7.3

Table H

Worcester Prime Sponsor Consortium Employment

	Employment Record		Employment Projections	
	Fiscal Year 1975	Fiscal Year 1976	Fiscal Year 1977	Fiscal Year 1978
Employment	135,014	134,549	138,745	142,117
Unemployment	14,441	14,596	10,687	10,650
Labor Force	149,455	149,145	149,432	152,767
Unemployment Rate	9.7	9.8	7.2	7.0

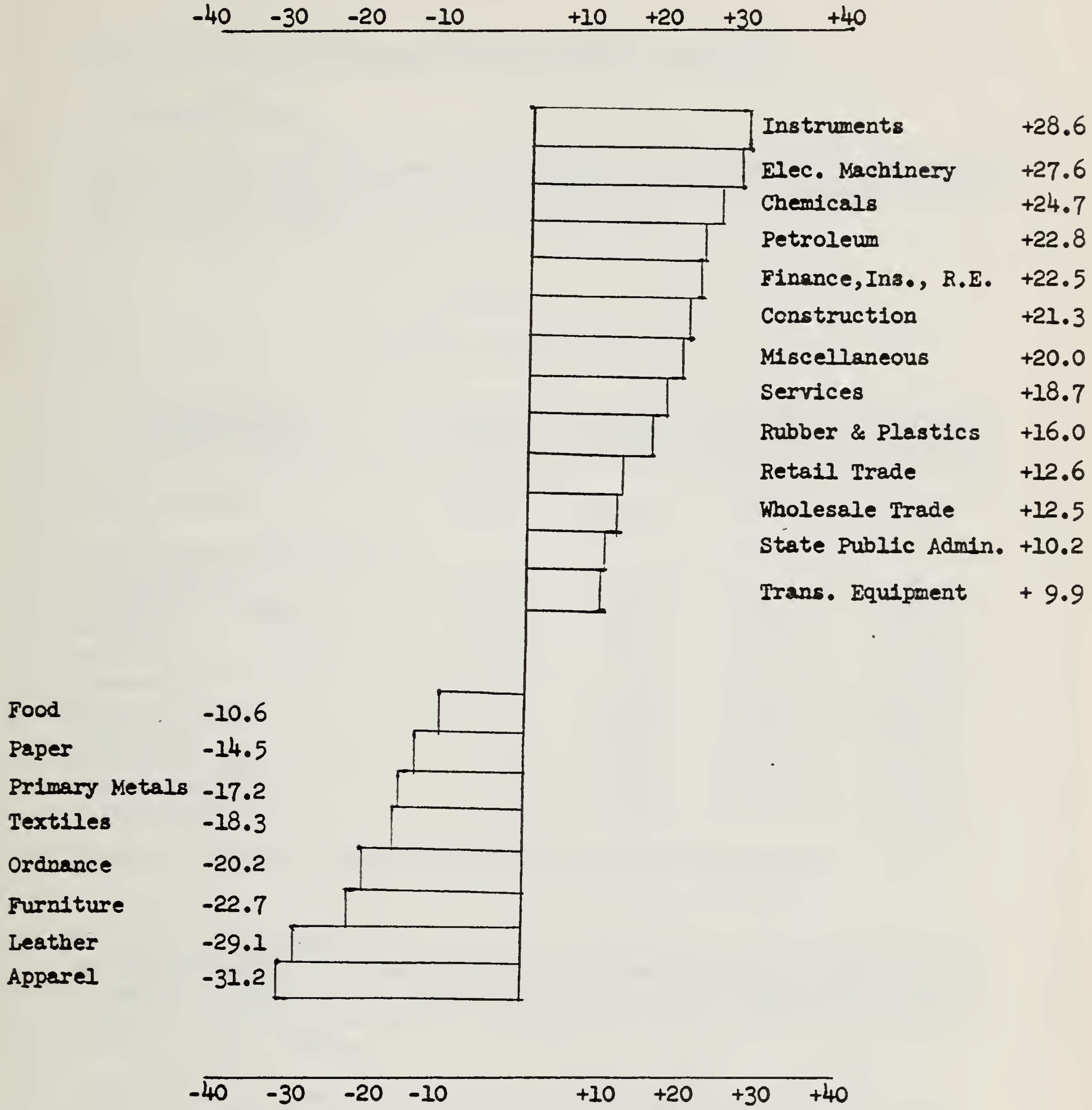
An overall growth of 1.0 percent or 282 persons is projected for all durable goods producers.

In the nondurable or soft goods manufacturing industries work rolls are projected to shrink by over ten percent. The biggest numerical loss is foreseen in textiles (-772 workers) and the largest percentage loss in apparel (-31.2 percent or 332 persons). The second largest numerical and percentage decline should be in leather (down 612 or 29.1 percent). Some expansion is foreseen, however, in rubber and plastics (+343 or 16.0 percent) with more than nine out of ten of the additions coming in the plastics sector. Chemicals should grow by 255 or 24.6 percent.

Nonmanufacturing overall is projected to grow by 15.2 percent over this period. Of the expected improvement of 15,169 nearly half (7,565) will come in services and almost twenty percent (3,152) in retail trade. Within services close to half of the expansion is allocated to medical and other health fields, with the principal areas of enlargement hospitals (+1,729) and convalescent institutions (+1,195). Sizeable growth should also occur in educational services (+2,264). In retail trade, eating and drinking places will add the most, 1,255. Insurance additions will represent a considerable portion of the expected growth in finance, insurance, and real estate (+22.5 percent). Construction gains should also exceed twenty percent. The only expected cutbacks are in agriculture and in federal government workers.

Graph I

Projected Major Percentage Changes in Industry Employment
1974-1985



Source: DES Occupation/Industry Department

IV. Employment Developments and Outlook by Occupation

a. Available Jobs

The improvement in employment opportunities in the Worcester area during 1976 is evident in the figures on unfilled job openings in the Worcester SMSA comparing December 1975 to December 1976.

Table J

Job Bank Job Openings

Classification of Occupations	December 1975	December 1976	Numerical Difference	Percentage Difference
Total Openings	1,031	2,184	+1,153	+111.8
Professional, Techical & Managerial	249	355	+ 106	+ 42.6
Clerical and Sales	202	452	+ 250	+123.8
Services	165	349	+ 184	+111.5
Farming	8	5	- 3	- 37.5
Processing	111	63	- 48	- 43.2
Machine Trades	91	365	+ 274	+301.1
Bench Work	57	242	+ 185	+324.6
Structural Work	55	135	+ 80	+145.5
Miscellaneous Work	88	216	+ 128	+145.5
Invalid Codes	5	2	- 3	- 60.0

Source: Job Bank: Occupation/Industry Research Department

The more than doubling of job openings registered with the Division of Employment Security reflects both an improvement in the economy and an intensified effort by the DES to get employers to register available positions. Of the openings in December 1976, 86.6 percent were of 30 days or longer duration.

Occupations with the largest number of openings as of that date are listed on the following page. Many of them are relatively low paid and high turnover jobs.

Table K

Openings by Occupations

Occupational Group	Occupational Code	Number of Openings
Professional, Technical and Managerial		
Head Nurses	075.128	26
Secondary School Teachers	091.228	24
Clerical and Sales		
Stenographers	202.388	20
Clerk Typists	209.388	39
General Clerks	209.588	47
General Sales Persons	289.458	47
Services		
Maids	306.878	29
Waiters, Waitresses	311	48
Masseurs, Masseuses	334	41
Porters and Cleaners	381	28
Processing		
Injection Molding Machine Operators	556.782	20
Machine Trades		
Lay-out Men	600.380	22
Turning Occupations	604	28
Milling & Planing Occupations	605	25
Metal Machining	609	23
Auto Mechanics	620.281	23
Frame Spinners	682.885	38
Bench Work		
Sewing Machine Operators, Garments	786	43
Miscellaneous Work		
Heavy Truck Drivers	905.883	49
Stock Boys/Men	922.887	20
Material Handlers	929.887	70

An in-house review of the educational requirements of jobs listed with the D.E.S. for 30 days or more should be of value to vocational counselors, young workers and minorities and other disadvantaged groups. The following analysis of educational requirements of such long term openings was made of those existing in the summer of 1976.

Table L below lists the requirements for those vacancies where some necessary level of educational attainment was specified. The ability to read and write was required for 41.4 percent of the openings while high school level education was demanded for 34.1 percent. Post high school training was demanded by 24.5 percent, with 15.7 percent requiring three to four years and 7.3 percent specifying one to two years beyond the high school level.

Table L

Job Openings Unfilled 30 Days or More, Required Education
Worcester Job Bank
July 30, 1976

Occupations	Read and Write	YEARS			
		12	13-14	15-16	17-18
Electronics Technician		2	12	1	
Research Computer Scientist				1	
Drafter, Electrical		1			
Industrial Engineer				1	
Manufacturing Engineer				1	
Efficiency Engineer				4	
Detail Drafter		1			
Systems Programmer				5	
Program Analyst				2	
Chemist, Analytical				1	
Physicist					1
Ornithologist				1	1
Counselor		1	1		2
Head Nurse		2		1	
Registered Nurse		3		1	
Licensed Practical Nurse		15	4	2	
Principal, Assistant					1
Teacher, Secondary Education				20	1
Teacher, Elementary School		1	1	10	
Teacher, Special Education				4	
Teacher, Vocational			3	4	
Learning Disabilities Instructor					1
Librarian				1	
Photographer		10			
Teacher, Art				1	
Teacher, Music				1	
Accountant				2	
Broker				1	
Manager, Contracts		3		2	
Store Manager, Trainee		3			

Table L

Job Openings Unfilled 30 Days Or More, Required Education
Worcester Job Bank
July 30, 1976 (cont.)

Occupations	Read and Write	YEARS			
		12	13-14	15-16	17-18
House Manager, Live-In		1	2		
Restaurant Manager		1			
Caseworker				2	
Executive Director, Scouting			1		
Programmer, Recreation		1			
Secretary		12	3		
Stenographer		3			
Systems Librarian		1			
Technical Typist		1			
Clerk Typist		2			
Bookkeeper		3			
Data Processing Supervisor			1		
Card-Tape-Converter Operator		2			
Key Punch Operator	3	1			
General Office Clerk	1				
Expediter		1			
Life Underwriter	2	57	3	4	
Salesperson, Cemetery Lots	4				
Financial Planning Specialist		2			
Salesperson, Women's Sportswear	1	1			
Salesperson, Ladies Wear		2			
Salesperson, Paint	3	1			
Salesperson, Vacuum Cleaners		1			
Salesperson, Organs		2			
Sales Agent, Any Industry	2	1			
Salesperson, Security Systems		2			
Housekeeper	1	1			
Housekeeper, Live-In		1			
Companion, Live-In	2				
Waiter/Waitress, Counter Work	1	1			
Pastry Cook	1				
Cook	1				
Baker	1				
Grill Person	1				
Cook, Short Order	2				
Security Guard	12				
Custodian, Live-In	1				
Cylinder Grinder	1				
Laborer, Electroplating	2				
Production Foreman, Plastics		1			
Mill Room Supervisor		1			

Table L
Job Openings Unfilled 30 Days or More, Required Education
Worcester Job Bank
July 30, 1976 (cont.)

Occupations	Read and Write	YEARS 12	13-14	15-16	17-18
Machinist	4				
Gear-Cutting Machine Operator	1				
Buffing Line Set-Up Operator	1				
Screw Machine Set-Up Person	3				
Chucking-Machine Set-Up Operator	2				
Screw Machine Set-Up Operator	6				
Machine Set-Up Operator	4				
Marking Machine Operator	2				
Machine Shop Supervisor		1			
Engine-Lathe Set-Up Operator	3				
Numerical Control Machine Operator	1				
Punch Press Operator	2				
Bell Spinner	3				
Automobile Mechanic	4	2			
Deck Engineer	1				
Automated Equipment Engineer		2			
Sewing Machine Mechanic	1				
Card Grinder	2				
Dresser Tender	1				
Frame Spinner	10				
Braid-Pattern Setter	2				
Weaver	7				
Braider Operator	1				
Arch-Cushion-Skiving Machine Oper.	45				
Edge Trimmer	4				
Cutter Operator	3				
Engraving Machine Operator		2			
Small Parts Assembler	6				
Research Technician Electronics			2		
Electronics Assembler		1			
Electronic Systems Test Technician			1		
Electrical-Equipment Tester		1			
Furniture Finisher		1			
Mender	7				
Tailor	1				
Stitcher, Nongarment	9				
Supervisor, Clothing	1				
Sheet-Metal Worker	1	2			
Automobile Worker	1				
Lay-Out Person, Structural Steel		1			

Table L

Job Openings Unfilled 30 Days or More, Required Education
Worcester Job Bank
July 30, 1976 (cont.)

Occupations	Read And Write	YEARS 12	13-14	15-16	17-18
Welder Apprentice, Arc	1				
Household Appliance Technician	1				
Painter	3				
Heavy Equipment Operator	1				
Plumber	1				
Second-Class Engineer	1				
Auxiliary-Equipment Operator	1				
Totals*	192	158	34	73	7

All openings specified educational requirements.

b. Job Prospects for Graduates in 1977

1. For Vocational School Graduates

The outlook is the best for several years. The best paid opportunities lie in the machine and welding trades. Following in order of desirability are sheet metal, auto mechanics, auto body, cabinet making, and printing trades. The fewest openings are in the electrical and plumbing trades and appliance repair. Apart from the trades there will be openings in service areas, restaurants, bakeries and nursing homes. For summer and part-time employment, construction will give some jobs, but even more will come from fast food businesses.

2. For High School Graduates

Graduates will have to join the world of employment in entry level jobs, which are unskilled or semi-skilled and usually pay only the minimum wage. There should be many of such opportunities, both full-time and part-time.

This type of opening requiring little experience will exist in some manufacturing industries, such as the plastics industry and hardware and furniture manufacturing. Possibilities in nonmanufacturing include finance, retail trade, insurance, real estate, food and health occupations.

3. For College Graduates

College and graduate school graduates will have to face up to the rigors of job competition and the reality that most jobs do not require college education. However, they will be aided by the continuing economic recovery. There will be some opportunities for vocational and industrial arts teachers, with the ever growing mini-computer firms on the borders of the labor area, in health systems, in public jobs such as law enforcement, welfare, and public sector administration and financial management, and in the startup of their own businesses.

c. Jobs in 1985

Based on the projected change in employment levels by industry by 1985, projections have been developed for the corresponding occupational needs at this time. Over the time span from 1974 to 1985, the number employed by occupation should rise from 151,556 to 167,372. Annual labor demand will be 7,929, of which 1,445 is due to growth and 6,484 to separations.

Table M

Estimated Annual Job Openings

All Occupations	Net Demand	Due to Growth	Due to Separations
Total All Occupations	7,929	1,445	6,484
Professional, Technical, Kindred	1,215	279	936
Managers, Officials, Proprietors	677	162	515
Sales Workers	501	110	391
Clerical & Kindred Workers	2,105	406	1,699
Craft and Kindred Workers	704	202	502
Operatives	952	- 34	986
Service Workers	1,576	320	1,256
Laborers, except Farm	203	44	159
Farmers & Farm Workers	- 4	- 44	40

Source: Occupation/Industry Research

Of the ten occupations which will have an annual demand of 150 or more through 1985 four are in clerical fields, including the top ranking miscellaneous secretaries with 516 openings. In second place with 394 openings is sales and sales workers, N.E.C. Three classes of nurses are also in the top ten, as a chronic shortage is aggravated by the demands of the University of Mass. Medical School. Miscellaneous managers and administrators with a demand for 360 workers is third.

All the increase in demand for operatives will be replacement demand, as will over 75 percent of the demand for clerical workers, craft workers, service workers and farm workers.

Table N

Applicants and Openings Registered with the DES in the Worcester LMA from October 1, 1976-December 31, 1976

Occupational Category	Total Number of Applicants	Percent of Total	Number of Openings Received	Percent of Total	Number of Openings Filled	Percent of Total	Ratio of Openings Received to Applicants	Ratio of Openings Filled to Applicants
Professional, Tech., and Managerial	2,319	15.3	151	7.1	53	3.8	6.5	2.3
Clerical, Sales	3,630	23.9	511	24.0	324	23.0	14.1	8.9
Services	2,285	15.1	388	18.2	245	17.4	17.0	10.7
Farming	205	1.4	4	0.2	4	0.3	2.0	2.0
Processing	441	2.9	92	4.4	67	4.8	20.9	15.2
Machine Trades	1,415	9.3	261	12.3	153	10.9	18.4	10.8
Bench Work	780	5.1	147	6.9	109	7.8	18.8	14.0
Structural Work	1,423	9.4	96	4.5	53	3.8	6.7	3.7
Miscellaneous	2,496	16.5	475	22.3	395	28.1	19.0	15.8
Invalid Codes	162	1.1	3	0.1	2	0.1	1.9	--
Total	15,156	100.0	2,128	100.0	1,405	100.0	14.0	9.3

Source: ESARS Table 96 of December 31, 1976

V. Recent Unemployment Trends and Outlook

The highest unemployment for the labor area in 1976 occurred in January and in March, with 21,400 or 11.3 percent of the civilian labor force out of work in both months. The intermediate month of February was only slightly better with 21,000 or 11.2 percent unemployed, and employment hits its mid-winter low of 21,000 at that time. Definite improvement began in April, when the ranks of the unemployed shrank by 2,300. By May another 1,000 had left the rolls bringing the rate down into single digits for the first time since January 1975. After the customary summer influx of new entrants and reentrants to the labor force, many of whom were unsuccessful in their job hunting, the downward movement in joblessness accelerated in the fall with drops of 1,500 in August, 1,700 in September and 1,500 in October. The number of unemployed reached its nadir in November at 12,700, when the unemployment rate was 6.8 percent, the lowest since November 1974 when it was 6.1 percent and 11,200 were out of work. December saw a slight rise in jobless ranks in keeping with the usual seasonal pattern.

Questions have been raised as to the validity of the steep decline in the unemployed roles from January to the low point in November, since the drop of 8,700 in unemployment was almost one and one half times the 5,900 addition to employment roles over this time span. The best explanation for this discrepancy is an over estimation of unemployed at the beginning of the year. The reason was that the numbers included many recipients of the Federal Supplemental Benefits program, who had been out of the labor force through retirement or discouragement and primarily returned to the labor force because of the opportunity for renewed benefit payments, but left again after exhaustion of benefits.

During 1976 the unemployment rate for the LMA ran below that of the state for eight months, including the final four. The annual Average was 9.3 percent, 0.2 percentage points below the state average.

The area continued throughout the year to be in the substantial unemployment category, although at decreasing levels. It was in Group F from July 1975 through January 1976 (12.0 percent or more), in Group E from February through May (9.0 to 11.9 percent), and in Group D since June (6.0 to 8.9 percent).

An area of substantial unemployment is one in which the current and anticipated local labor supply substantially exceeds labor requirements. An area is placed in this category when

(1) Unemployment in the area is equal to 6 percent or more of its labor force discounting seasonal or temporary factors, and

(2) It is anticipated that the rate of unemployment during the next two months will remain at 6 percent or more, discounting temporary or seasonal factors.

Some comment must be made about the fact that the unemployment figures and unemployment rates for 1976 as published in this report are significantly higher than those issued in the course of the year. The figures compiled monthly by the Division of Employment Security are done in accordance with required procedures of the Department of Labor, which, however, have been overestimating withdrawals from the labor force as claimaints have been exhausting their extended benefits. The revisions in the state's figures were calculated early in 1977, based on the monthly household surveys of employed and unemployed made for the Department of Labor. In the case of the state the revised annual rate for 1976 is 1.5 percentage points higher (9.5 versus 8.0 percent) and for the Worcester LMA is 1.7 percentage points higher (9.3 versus 7.6). For the Worcester area the average number of unemployed was revised from 13,700 to 17,400, a jump of 3,700.

COMMONWEALTH OF MASSACHUSETTS DIVISION OF EMPLOYMENT SECURITY

TABLE O

SELECTED CHARACTERISTICS OF INSURED UNEMPLOYED
WORCESTER OFFICE

APRIL-MAY 1976

	ALL PROGRAMS NUMBER	ALL PROGRAMS PERCENT	REGULAR PRO-GRAMS NUMBER	TRIGGER. EXTEND. BENEFIT (TREX) NUMBER	FEDERAL SUPP. BENEFIT (FSB) NUMBER	SPEC. UNEMP. ASSIST (SUA) NUMBER
TOTAL	10600	100.0	5750	1420	3170	260
AGE						
UNDER 20	-	-	-	-	-	-
UNDER 25	1340	12.6	680	280	360	20
25 - 34	2860	27.0	1690	340	760	70
35 - 44	1330	12.5	760	190	330	50
45 - 54	1600	15.1	940	210	430	20
55 - 64	1880	17.7	1030	240	590	20
65 & OVER	1520	14.3	620	160	660	80
I.N.A.	70	.7	30	-	40	-
SEX						
MEN	6560	61.9	3850	810	1720	180
WOMEN	4010	37.8	1870	610	1450	80
I.N.A.	30	.3	30	-	-	-
ETHNIC GROUP						
WHITE	9800	92.5	5320	1300	2960	220
NON-WHITE	260	2.5	120	40	80	20
I.N.A.	540	5.1	310	80	130	20
SPANISH SURNAME	100	.9	40	30	30	-
OCCUPATION						
PROF.,TECH.,MGT	1510	14.2	790	170	440	110
CLERICAL/SALES	2610	24.6	1230	370	970	40
SERVICES	1080	10.2	510	170	360	40
FARM,FISH,FOR.	60	.6	60	-	-	-
PROCESSING	430	4.1	250	30	150	-
MACHINE TRADES	1100	10.4	530	150	420	-
BENCH WORK	690	6.5	390	70	230	-
STRUCTURAL	1820	17.2	1220	260	300	40
MISC. WORK	1280	12.1	750	200	300	30
I.N.A.	20	.2	20	-	-	-
RECENT DURATION						
0-9 WEEKS	2710	25.6	2450	140	100	20
10-19 WEEKS	2620	24.7	2250	190	70	110
20-29 WEEKS	1640	15.5	930	450	190	70
30 + WEEKS	3620	34.2	110	640	2810	60

COMMONWEALTH OF MASSACHUSETTS DIVISION OF EMPLOYMENT SECURITY

TABLE O
CONTINUED -1

	ALL PROGRAMS		REGULAR PROGRAMS	TRIGGER. EXTEND. BENEFIT (TREX)	FEDERAL SUPP. BENEFIT (FSB)	SPEC. UNEMP. ASSIST (SUA)
	NUMBER	PERCENT	NUMBER	NUMBER	NUMBER	NUMBER
INDUSTRY ATTACH.						
MANUFACTURING	2550	24.1	1320	270	940	20
CON. CONSTRUCT	1330	12.5	910	210	210	-
TRAN./UTIL.	360	3.4	250	40	70	-
WHOL/RET.TRADE	2010	19.0	1080	270	660	-
FIN/INS/R.E.	430	4.1	200	100	130	-
SERVICES	1220	11.5	550	140	490	40
GOVERNMENTS	370	3.5	160	10	110	90
OTHERS	70	.7	70	-	-	-
I.N.A.	2260	21.3	1210	380	560	110
AVE. WEEKLY WAGE						
UNDER $100	2620	24.7	1340	390	810	80
$100 - $149	2640	24.9	1310	390	890	50
$150 - $199	1930	18.2	980	290	620	40
$200 - $249	1380	13.0	780	160	400	40
$250 - $299	900	8.5	630	70	170	30
$300 OR MORE	1020	9.6	610	110	280	20
I.N.A.	110	1.0	100	10	-	-
SEPARATION REASON						
LAYOFF	6950	65.6	4180	820	1820	130
QUIT VOL. RET.	730	6.9	270	120	310	30
QUIT PREGNANCY	-	-	-	-	-	-
QUIT OTHER	1670	15.8	660	330	620	60
DISCHARGES	1000	9.4	420	150	390	40
LABOR DISPUTE	-	-	-	-	-	-
OTHER/INA	250	2.4	220	-	30	-

GRAPH II

TOTAL UNEMPLOYMENT CLAIMS BY PROGRAM
REGULAR(BLANK) TREX(SLANT DOWN) FSB(CROSSED)

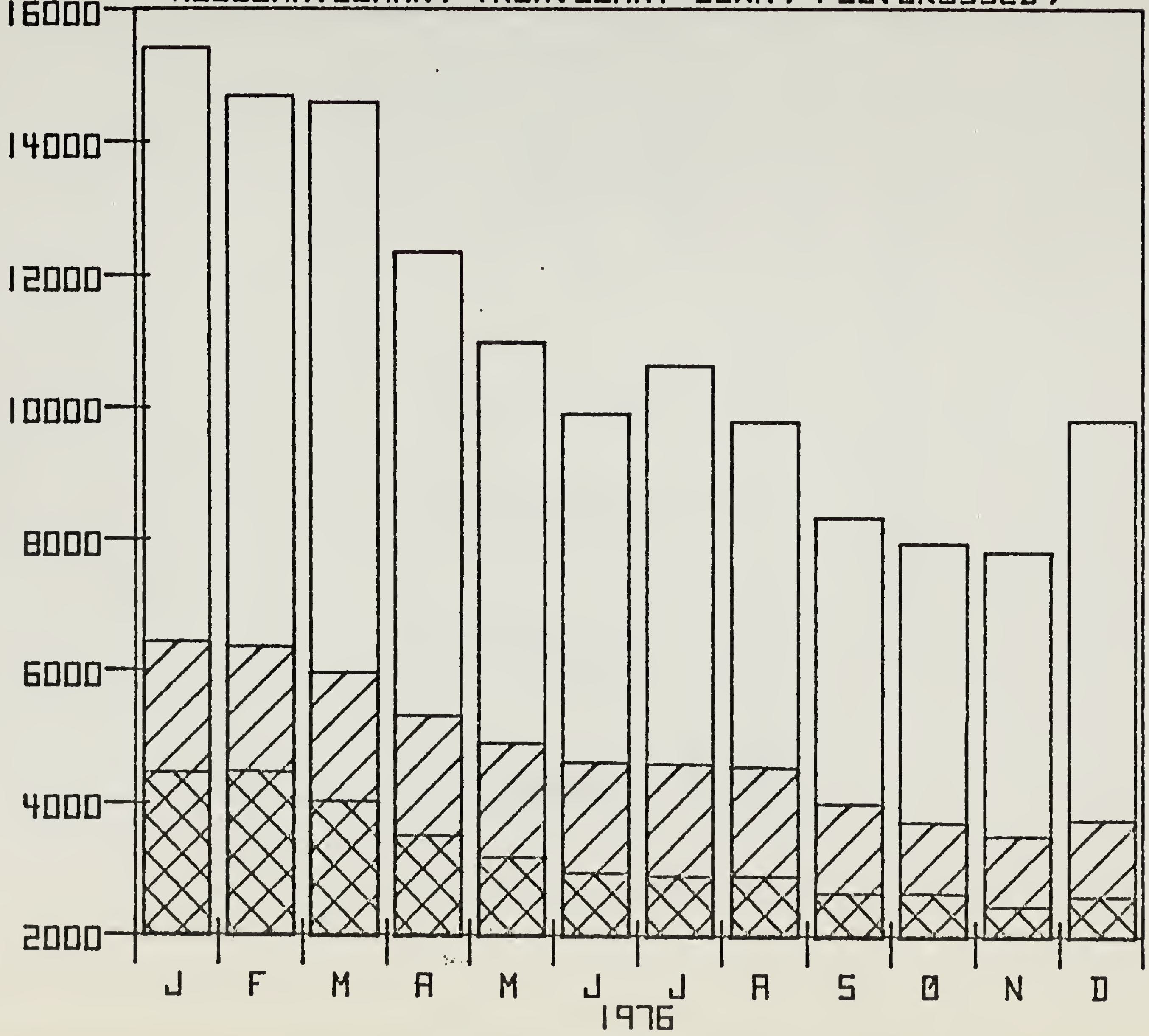


Table P

Annual Averages of Monthly Estimates
of Categories of the Unemployed
in the Worcester LMA

	1976	1975	Difference	Percent Change
Insured Unemployed	4,327	8,192	-3,865	-47.2
Insured Unemployed, Less Partials	4,110	7,937	-3,827	-48.2
Initial Claims	458	634	- 176	-27.8
Unemployed Exhaustees	6,412	12,422	-6,010	-48.4
Unemp., Disqualified	306	463	- 157	-33.9
Covered Unemployed	11,162	21,003	-9,841	-46.9
Non-Covered Unemployed	795	1,464	- 669	-45.7
Entrants	1,626	2,943	-1,317	-44.8
Reentrants	1,446	1,595	- 149	- 9.3
Final Unemp., Estimate	17,400	21,100	-3,700	-17.5

Source: Division of Employment Security

Table Q

Unadjusted Unemployment Rates for the Worcester LMA Compared to State and National Rates and the Boston SMSA

1976	Worcester LMA	Boston SMSA	State	Nation
January	11.3	10.8	11.7	8.8
February	11.2	10.7	11.5	8.7
March	11.3	10.1	11.0	8.1
April	10.1	9.6	10.2	7.4
May	9.6	9.2	9.6	6.7
June	9.6	9.4	9.8	8.0
July	9.9	9.4	9.9	7.8
August	9.1	8.7	9.0	7.6
September	8.1	8.1	8.4	7.4
October	7.3	7.6	7.9	7.2
November	6.8	7.1	7.5	7.4
December	7.2	6.8	7.6	7.4
Annual Average	9.3	9.0	9.5	7.7
1977				
January (P)	7.0	7.3	8.0	8.3

P = PRELIMINARY

VI. Individuals in Need of Manpower Services

a. Barriers to Employment

An analysis of the characteristics of applicants registered with the Division of Employment Security (see Table R) shows a significant number of them to have characteristics which often serve as deterrents to ready placement, even apart from the overall shortage of jobs in the economy.

For example, 23.1 percent are younger than the prime working ages of 22 through 44. This younger group lacks the experience or length of training required for many positions and are also considered to be less firmly attached to the work ethic because of the restlessness of youth, the absence of family responsibilities, and the fact that many jobs available to them lack challenge or upward mobility.

On the other hand, 16.7 percent are in the 45 years old and older group, where subtle age discrimination continues despite legal prohibitions. This age group may also suffer from lesser physical or mental agility for some positions, an inability to adjust to new job situations, obsolescent skills, and lack of mobility to either move or commute to a new job location. Some of these older workers also are technically just on layoffs, so that they may be holding out for a hoped-for return to their old position.

Over one third (37.9 percent) of all applicants have less than a high school education, whether academic or vocational. Nearly 25 percent have some post-secondary school education, which may indicate the lack of completed training, but also gives some measure of the difficulty many college graduates have in getting their first job.

Of all applicants four percent had to be counseled and 1.6 percent enrolled in training. Over five percent were handicapped, and 10.1 percent were Vietnam-era veterans. From an ethnic and racial grouping, 4.2 percent were Spanish surnamed and 4.2 percent Black.

Table R
Characteristics of Applicants
Cumulative October 1976 Through January 1977

Characteristics of Applicants	Registered Applicants	Percent of Total	Percent of Total In FY 1976
Age - All Ages	16,455	100.0	100.0
Under 20 years	2,108	12.8	14.8
20 - 21	1,689	10.3	12.1
22 - 24	2,651	16.1	16.8
25 - 29	2,941	17.9	17.5
30 - 39	3,263	19.8	16.6
40 - 44	1,050	6.4	5.7
45 - 54	1,701	10.3	10.0
55 - 64	950	5.8	5.8
65 years or older	102	0.6	0.7
Sex			
Men	9,447	57.4	57.8
Women	7,008	42.6	42.2
Highest Grade of School Completed			
0 - 7	728	4.4	4.0
8 - 11	5,505	32.2	31.2
12	6,177	37.5	38.2
Over 12	4,045	24.6	26.5
Handicapped	873	5.3	5.0
Welfare	3,701	22.5	15.0
Rural Residents	2,167	13.2	13.3
Ethnic Group			
White	15,571	94.6	95.4
Black	695	4.2	3.7
Other	189	1.1	1.0
Spanish Surname	699	4.2	3.8
All Veterans	3,131	19.0	17.5
Vietnam Era	1,665	10.1	9.2
Recently Separated	692	4.2	3.9
Disabled Veterans	178	1.1	0.8

Source: ESARS January 1977

The profile of applicants registered with the DES in fiscal year 1977 shows some differences over the characteristics of applicants in fiscal year 1976. There is a big jump in the percentage who are welfare recipients, from 15.0 to 22.5 percent. Blacks and Spanish speaking represent slightly greater percentages, as do all categories of veterans. However, opportunities must have improved for younger workers as the percentages are lower for all three age brackets under age 25.

b. Needs For Employment Related Assistance

As unemployment will continue relatively high the Division of Employment Security will still have a large volume of applicants to service through FY 1978.

The estimated average number unemployed for FY 1978 of 14,001 will result in an estimated 42,085 different individuals being unemployed during the year in the LMA. The highest unemployment rate will be 23.1 percent for non-white males in the LMA, and 18.1 percent for the same group in the consortium.

The Division annually develops a statistical breakdown of the labor force and the numbers employed and unemployed by race and sex called "Manpower Information For Affirmative Action Programs", which is the official source of information used by companies throughout the area and the Federal Office of Contract Compliance to develop and implement affirmative action plans to increase and upgrade the employment of women and minorities. Affirmative action efforts have also been enlarged during 1976, per regulations published in the Federal Register of June 25, 1976, to include disabled veterans and veterans of the Vietnam-era. Federal contractors and subcontractors with contracts of $10,000 or more must file with Division of Employment Security bona fide job openings which occur during the performance of the contract and file a quarterly report giving :

(1) the number of individuals hired during the reporting period,

(2) the number of non-disabled veterans of the Vietnam-era hired,

(3) the number of disabled veterans of the Vietnam-era hired, and

(4) the total number of disabled veterans hired. The purpose of these new regulations is to assure compliance with the Vietnam-Era

Veterans Readjustment Assistance Act of 1974.

Although many who work part time do so by choice, e.g. students, housewives, retirees, there are many who do so for economic reasons only. It is estimated that there will be 7,922 of such persons in the LMA and 6,102 in the consortium. In both areas over half the part timers are women, both among whites and non-whites.

Every Spring the income levels which determine poverty are reevaluated by the Federal Department of Labor to make allowances for whatever inflation has taken place over the year. As of April 1, 1976 the following criteria went into effect.

Table S

Family Income Criteria for Designation of Poor Families

Family Size	As of April 1, 1976 Nonfarm Family	Farm Family
1	$2,800	$2,400
2	3,700	3,160
3	4,600	3,920
4	5,500	4,680
5	6,400	5,440
6	7,300	6,200

Source: U.S. D.O.L.

The Labor Department definition of a "disadvantaged" person is one who is poor, or a member of a poor family, who does not have adequate employment and is one of the following:

(1) a school dropout;

(2) a member of a minority group;

(3) under 22 years of age;

(4) 45 years of age or older; and

(5) handicapped.

Although we have no cross sectional breakout of the characteristics of the disadvantaged, this enumeration of persons who are registered in the Worcester LMA shows those who have most of the attributes, which classify them as such. These claimants so analyzed are the cumulative total for the first four months of fiscal year 1977.

Table T

Disadvantaged Job Applicants

Description	Applicants Available	Percent of Applicants
1. Had not completed 12th grade	4,045	24.6
2. Under 22 years of age	3,797	23.1
3. 45 years old or older	2,753	16.7
4. Economically Disadvantaged*	4,728	28.7
5. Minority Group Member	1,583	9.6
6. Handicapped	873	5.3
7. Welfare Recipients	3,701	22.5
8. Food Stamp Recipients	1,427	8.7
9. Not working	15,585	94.7
10. Working part time	444	2.7
Total Registered Applicants Year to Date	16,455	

Source: ESARS: Table 06 January 1977

*For ESARS listing an economically disadvantaged individual is one who is a member of a family

(1) which receives cash welfare payments, or

(2) whose annual income in relation to family size and location does not exceed the most recently established poverty levels determined in accordance with criteria established by the Office of Management and Budget (OMB).

VII. Labor Supply/Demand Imbalances

According to an analysis of the ratio of applicants to openings in the Worcester Job Bank as of November 30, 1976 the greatest surplus of applicants to registered jobs existed for farming or forestry jobs, 125 to one. Numerically, however, this is not significant and is the smallest job category. The next greatest surplus with a ratio of applicants to openings of 56 to 1 was in miscellaneous work, especially for material handlers, hand packagers, stock boys and warehousemen. This category also includes fork lift operators, truck drivers, amusement occupations, and graphic art workers.

The third greatest surplus was of structural workers, 25/1. The slump in the construction industry along with still incomplete recovery in fabricated metals are causes for the surplus here. Particular specialties within this occupational grouping with large numbers of applicants include fence and billboard erectors, carpenters, building maintenance men, roofer helpers, general construction workers, painters, automobile body repairmen, welders, electricians, and sheet metal workers.

A comparison of job vacancies in the Worcester Job Bank in November 1976 as against October 1976 showed only Bench Work to have more openings, a total of 18 more. (See Table U).

A high proportion of jobs registered with D. E. S. seems to be hard to fill. For example, as of December 31, 1976, of the 2136 openings received in the first quarter of fiscal year 1977, 75 percent or 1603 had been open 150 days or more and only 15.5 percent for three days or less.

Another measure of the difficulty of matching applicants to openings is that the ratio of openings filled to openings received in the quarter ending 12/31/76 was 66 percent. The greatest success in filling openings was for jobs paying from $2.30 to $3.49 per hour, where placements averaged 72.9 percent. In contract, this ratio was only 19.4 percent for the lowest paying jobs (under $2.30), due to their unattractiveness financially and probably in other respects, also. For jobs payings $3.50 and up this placement ratio was just under 50 percent (48.8), indicating, perhaps, that employers are more selective in hiring for these better jobs.

COMMENTS

Professional, Technical, and Managerial

During the period from October 1976 to November 1976, openings in this major occupational category declined by 23.6 percent from 258 openings for October to 197 unfilled openings for November. The percent of openings, in relation to the total number of job openings listed on the Worcester Job Bank, rose 2.4 percentage points to 14.8 percent of total openings. Substantial decreases within subgroups included architecture and engineering (-20) and medicine and health (-40). Changes within specific occupations included registered nurses (-10) and licensed practical nurses (+13).

Clerical and Sales Work

Openings in the Clerical and Sales Work category registered a 13 percent decline in unfilled job openings, from a level of 343 openings for October to 298 openings for November. The percentage of openings within this category, when related to the total, rose from the October level of 17.2 percent to 22.4 percent for November, an increase of 5.2 percentage points. Specific subgroup changes included stenography, typing, filing and related occupations (-36), computing and account-recording (-31), miscellaneous clerical (-50), sales agents and salespersons, commodities (+39) and merchandising occupations, except salespersons (+34). Specific occupational changes included secretaries (-9), clerk-typists (-11) and general office clerks (-14).

Services

Openings for this category fell from the October level of 294 unfilled job openings to 227 openings for November, a drop of 67 openings or 23 percent. The percent of openings in this category, in relation to the total number of job openings listed on the Worcester Job Bank, rose 2.3 percentage points from the October level of 14.8 percent. Moderate subgroup changes in unfilled job openings included domestic service (+12), food and beverage preparation and service (-29), miscellaneous personal service (-30) and protective service (-15). Specific occupational changes included waiters and waitresses (-19) and nurse aides (-34).

Farming, Fishery, Forestry, and Related Work

Seasonal factors were responsible for the dramatic drop in unfilled job openings. The unfilled job openings declined from the October level of 383 openings to a November level of 1 opening.

Machine Trades

Openings in the Machine Trades category declined 16.4 percent during the October through November period, falling from 336 openings for October to 281 openings for November. The percent of openings in the Machine Trades category, in relation to the total number of job openings, rose 4.3 percentage points from the October level of 16.8 percent. Specific demand changes among the subgroups included metal machining (-44), textile (-10) and machine trades occupations, n.e.c. (+15).

Bench Work

The demand for workers in this major occupational category increased slightly from 198 unfilled job openings for October 1976 to 216 openings for November 1976, an increase of 18 openings or 9.1 percent. The percent of openings held in this category, in relation to the total number of job openings listed on the Worcester Job Bank, rose by 6.3 percentage points from the October level of 9.9 percent. Notable subgroup changes included fabrication and repair of scientific and medical apparatus, photographic and optical goods, watches and clocks, and related products (+30), assembly and repair of electrical equipment (+16), fabrication and repair of products made from assorted materials (-32) and fabrication and repair of textile, leather and related products (+18). Changes in specific occupations included electronic assemblers (-20).

Structural Work

Total unfilled openings for Structural Workers dropped slightly during the October-November period. The sharp decline of unfilled job openings of 91 percent which was registered during the July to October 1976 quarter was followed by a 24 percent decline during the period from October to November 1976. The major reason for the sharp decrease during this period was the seasonal decline in the demand for structural workers. The most notable decline among the subgroups occurred in the construction occupations, n.e.c. (-13). When related to the total openings for structural workers this subgroup contributed 28 percent of the total drop in job openings.

Miscellaneous Work

Unfilled job openings declined by 74 percent for Miscellaneous Work, from 112 openings in October to 29 unfilled job openings in November. Notable changes were registered in the subgroups of motor freight (-19), transportation occupations, n.e.c. (-19) and packaging and materials handling (-45).

TABLE U

Comparison of Job Vacancies by Major Occupational Categories

Worcester Job Bank

November 1976 - October 1976

Major Occupational Categories	November 1976		October 1976	
	Total	Percent	Total	Percent
Professional, Technical, & Managerial	197	14.8	258	12.4
Clerical & Sales Work	298	22.4	343	17.2
Services	227	17.1	294	14.8
Farming, Fishery, Forestry, & Rel. Work	1	0.1	383	19.1
Processing	46	3.5	37	1.9
Machine Trades	281	21.1	336	16.8
Bench Work	216	16.2	198	9.9
Structural Work	35	2.6	46	2.3
Miscellaneous Work	29	2.2	112	5.6
ALL OPENINGS	1,330	100.0	2,007	100.0

TABLE V

Unfilled Job Openings, By Major Occupational Category
And Selected Occupational Groups, Including Related Wage Data
Worcester Job Bank
November 30, 1976

Major Occupational Category Selected Occupational Group	Number Unfilled Openings	WEEKLY WAGE RATE**		
		Low	Median	High
0,1 PROFESSIONAL, TECHNICAL, & MANAGERIAL	197			
00,01 Architecture & Engineering	63			
003.081 Structural Engineer	12	$211	$272	$297
003.181 Electronic Technician	22	125	193	500
012.188 Efficiency Engineer	12	180	230	307
02 Mathematics & Physical Sciences	19			
020.188 Programmer, Computer	7	192	270	379
04 Life Sciences	5			
045.108 Counselor	5	100	167	221
07 Medicine & Health	52			
075.378 Registered Nurse	8	150	171	210
079.378 Licensed Practical Nurse	35	130	150	192
09 Education	5			
10 Museum, Library, & Archival Sciences	3			
11 Law & Jurisprudence	1			
13 Writing	1			
14 Art	1			
15 Entertainment & Recreation	2			
16 Administrative Specializations	15			
163.118 Sales Manager	6	138	300	384
18 Managers & Officials, N.E.C.	19			
19 Professional, Technical, & Managerial	11			
195.108 Caseworker	8	138	172	250

TABLE V
Unfilled Job Openings (Continued)
Worcester Job Bank
November 30, 1976

Major Occupational Category Selected Occupational Group	Number Unfilled Openings	WEEKLY WAGE RATE**		
		Low	Median	High
2 CLERICAL & SALES WORK	298			
20 Stenography, Typing, Filing & Related Occupations	52			
201.368 Secretary	30	$126	$126	$160
209.388 Clerk-Typist	13	113	116	130
21 Computing & Account-Recording	58			
210.388 Bookkeeper	21	133	133	160
219.388 General Office Clerk	25	120	120	136
22 Material & Production Recording	2			
23 Information & Message Distribution	9			
24 Miscellaneous Clerical Work	10			
25 Sales Agent, Services	57			
250.258 Life Underwriter	47	150	150	600
26, 27, 28 Sales Agent & Salesperson, Commodities	63			
278.358 Salesperson, Appliances	10	50 1/	50	50
289.458 Sales Representative	38	92 1/	133	175
29 Merchandising Occupations, Except Sales	47			
293.358 Contribution Solicitor	31	92 1/	96	100
2 SERVICES	227			
30 Domestic Service	29			
306.878 Housekeeper	19	30 1/	91	150
31 Food & Beverage Preparation & Service	79			
311.878 Waiter/Waitress	19	50 1/	80	100
313.381 Cook	21	112	112	225
318.887 Kitchen Helper	13	88 1/	94	120
32 Lodging & Related Service	8			

TABLE V
Unfilled Job Openings (Continued)
Worcester Job Bank
November 30, 1976

Major Occupational Category Selected Occupational Group	Number Unfilled Openings	WEEKLY WAGE RATE**		
		Low	Median	High
33 Barbering, Cosmetology, & Rel. Service	3			
34 Amusement & Recreation Service	30			
341.368 Recreation Facility Attendant	11	$66	$66	$66
35 Miscellaneous Personal Service	30			
355.878 Ambulance Attendant	11	88	92	126
359.878 Teacher, Nursery School	12	48	48	92
36 Apparel & Furnishings Service	5			
37 Protective Service	31			
372.868 Security Guard	29	92	93	114
38 Building & Related Service	12			
381.887 Charperson	12	92	100	124
4 FARMING, FISHERY, FORESTRY, & RELATED WORK	1			
40 Plant Farming	1			
5 PROCESSING	46			
50 Processing of Metal	2			
51 Ore Refining & Foundry	3			
52 Processing of Food, Tobacco, & Rel. Prod.	2			
54 Processing of Petroleum, Coal, Natural & Manufactured Gas & Related Products	1			
55 Chemicals, Plastics, Synthetics, Rubber, Paint, & Related Products	11			
556.782 Arch-Cushion-Press Operator	10	102	118	118
58 Leather, Textiles, & Related Products	26			
589.886 Cementer, Machine Applicator	24	92	92	92
59 Processing Occupations, N.E.C.	1			

TABLE V
Unfilled Job Openings (Continued)
Worcester Job Bank
November 30, 1976

Major Occupational Category Selected Occupational Group	Number Unfilled Openings	WEEKLY WAGE RATE**		
		Low	Median	High
6 MACHINE TRADES	281			
60 Metal Machining	132			
600.280 Machinist	40	$120	$180	$210
600.380 Machine Set-Up Operator	18	120	141	152
61 Metalworking Occupations, N.E.C.	13			
62, 63 Mechanics & Machinery Repairers	36			
620.281 Automobile Mechanic	19	100	150	244
65 Printing	13			
66 Wood Machining	12			
68 Textile	36			
69 Machine Trades Occupations, N.E.C.	52			
690.782 Stitchers	22	110	115	120
690.885 Assembly Press Operator	28	92	106	120
7 BENCH WORK	216			
70 Fabrication, Assembly, & Repair of Metal Products, N.E.C.	5			
71 Fabrication & Repair of Scientific & Medical Apparatus	31			
713.884 Assembler, Optical Equipment	21	144	144	144
72 Assembly & Repair of Electrical Equip.	98			
726.781 Electronics Assembler	14	92	133	158
726.884 Antenna Assembler	50	92	115	125
726.887 Assembler, Machine Work	10	120	120	120
73 Fabrication & Repair of Products Made From Assorted Materials	2			
74 Printing, Decorating, & Rel. Occupations	1			
76 Fabrication & Repair of Wood Products	6			

TABLE V
Unfilled Job Openings (Continued)
Worcester Job Bank
November 30, 1976

Major Occupational Category Selected Occupational Group	Number Unfilled Openings	WEEKLY WAGE RATE**		
		Low	Median	High
77 Fabrication & Repair of Sand, Stone, Clay & Glass Products	2			
78 Fabrication & Repair of Textile, Leather, & Related Products	71			
786.782 Sewing-Machine Operator, Garment	19	$ 92	$100	$118
788.887 Sewing-Machine Oper., Nongarment	24	92	92	92
8 STRUCTURAL WORK	35			
80 Metal Fabricating, N.E.C.	9			
81 Welders, Flame Cutters, & Related Work	2			
82 Electrical Assembling, Installing, & Rep.	10			
84 Painting, Plastering, Waterproofing, Cementing, & Related Work	2			
86 Construction Occupations, N.E.C.	9			
89 Structural Work Occupations, N.E.C.	3			
9 MISCELLANEOUS WORK	29			
90 Motor Freight	2			
91 Transportation Occupations, N.E.C.	1			
92 Packaging & Materials Handling	12			
95 Production & Distribution of Utilities	4			
97 Graphic Art Work	10			
GRAND TOTAL	1,330			

* Includes out-of-state openings.
** Full time openings only.
1/ Plus tips, commission, or other fringe benefits.

TABLE W
PERCENTAGE COMPOSITION OF ACTIVE JOB APPLICANTS AND UNFILLED JOB OPENINGS BY MAJOR OCCUPATIONAL CATEGORY
November 30, 1976

OCCUPATIONAL CATEGORY	% Composition of D.E.S. Active Applicants 1/	% Composition of Unfilled Job Openings 2/	Ratio of Applicants to Openings
TOTAL	100.0	100.0	7/1
Professional, Technical, & Managerial	15.6	14.8	8/1
Clerical & Sales Work	24.1	22.4	8/1
Services	15.6	17.1	7/1
Farming, Fishery, & Forestry	1.3	0.1	125/1
Processing	3.0	3.5	6/1
Machine Trades	9.5	21.1	3/1
Bench Work	5.2	16.2	2/1
Structural Work	9.0	2.6	25/1.
Miscellaneous Work	16.7	2.2	56/1

1/ Source: Table 96, ESARS, November 30, 1976.

2/ Open Order Job Bank, November 30, 1976.

Another indication of relative labor supply/ demand imbalances is revealed by a comparison of the occupations of the insured unemployed as against the occupations with registered job openings. In as much as the insured unemployed represent only part of the unemployed and the registered job openings aren't necessarily, of the same range as the total number of openings, this comparison has reduced validity.

Table X
Occupational Needs Versus Supply

Category	Occupations of Insured Unemployed*		Occupations of Registered Unfilled Job Openings#	
	Number	Percent	Number	Openings Percent
Total	10,600	100.0	1,144	100.0
Prof., Tech., Managerial	1,510	14.2	151	13.2
Clerical and Sales	2,610	24.6	198	17.3
Services	1,080	10.2	206	18.0
Farm., Fish., & Forestry	60	0.6	9	0.8
Processing	430	4.0	123	10.7
Machine Trades	1,100	10.4	150	13.1
Bench Work	690	6.5	132	11.5
Structural	1,820	17.2	99	8.7
Miscellaneous	1,280	12.1	75	6.6
INA	20	0.2	1	0.1

* As of April/May 1976
# As of April 30, 1976, ESARS Table 96

In these broad occupational groupings there is a rough equivalency of demand and supply in the professional, technical, and managerial category, but a definite surplus of clerical and sales, structural (largely, construction workers), and the largely unskilled miscellaneous. A favorable ratio, however, exists for occupations in services, processing, bench work, and, to a lesser extent, machine trades.

VIII. Training Programs

Under the Comprehensive Employment and Training Act (CETA) administration, Worcester is a prime sponsor for an area which includes 14 communities, Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Northboro, Paxton, Rutland, Shrewsbury, Spencer, Westboro, West Boylston, and the city of Worcester. Under Title I, CETA has been organizing a number of training programs in the area, in coordination with their counseling, testing and placement activities. During FY 1977 their major emphasis has been on training and employability development for the economically disadvantaged, through on-the-job training, classroom occupational training, and work expereince. Their main goal has been to move the economically disadvantaged target groups, the unemployed and the underemployed into unsubsidized employment. They take a comprehensive view of training which aims to train "workers who meet the needs of employers in terms of entry level skills, attitudes, and motivation".*

Much of training is done by a sub-grantee of CETA, the Career Education Training Center, which is operated by the Worcester Vocational School Department. They expect 240 enrollees during FY 1977, who will receive maintenance allowances and supplemental services while training, and placement services after completion. They futher expect 80 percent to complete this training and 65 percent to be placed.

The Division of Employment Security, the Worcester Prime Sponsor and the National Alliance of Businessmen (NAB) maintain an on-the-job training program in the area. The main occupations for trainees are expected to be machine set-up operators and general office clerks. Other OJT is given in electronic assembly and materials handling. Slots in these latter two courses are often given to those not fluent in English while they are taking a language course.

The Division Employment Security administers a Law Offender Services Department (LOSD) through the CETA Prime Sponsor. They anticipate serving 380 ex-offenders in FY 1977 with job development, placement and referral services. CETA has also designated Division of Employment Security to provide intake, placement and follow-up for its Institutional Training Program, and, tentatively, the NAB/OJT program.

*From Worcester "CETA Policy Statement" for FY 1977, page 16.

The local Community Action Counsel operates the CETA Work Experience Program.

The Worcester Opportunities Industrialization Center (OIC) plans to serve 250 Individuals in FY 1977 with pre-vocational and non-duplicative skills training programs as well as other services, and hopes to place 100 in "permanent" jobs. The pre-vocational training is in basic computational skills, basic communication skills consumerism, personal development, ethnic issues, job dynamics, and introductory clerical training. OIC is also developing skills training programs for retail salesclerks and for building remodeling and refurbishing.

Enrollees in the CETA Classroom Training courses must be largely residents of the consortuim and meet the CETA act guidelines. However up to 20 - 30 percent of them may be selected from outside the consortium. Eighty percent must have been certified as disadvantaged by Division Employment Security. Veterans are given a 24 hour priority to enroll.

INVENTORY OF CETA MANPOWER PROGRAMS

PROGRAM	FUNDING SOURCE	NUMBER SERVED	FUNDING LEVEL	TARGET POPULATION AND PROGRAM OBJECTIVE(S)
Neighborhood Youth Corps In-School	CETA Title I 100%	214	$136,460	To provide paid part-time experience for economically disadvantaged school students and individualized supportive services on an as-needed basis to encourage school progress and to solve job station related problems.
Neighborhood Youth Corps Out-Of-School	CETA Title I 100%	128	$193,000	To provide paid work experience and individualized supportive service s to economically disadvantaged youth in the Worcester Consortium area.
Neighborhood Youth Corps Summer	CETA Titles I and III	1,390	$882,000	To provide low income youth with paid summer employment experience and encourage them to return to school.
New Careers	CETA Title I 100%	114	$387,300	To develop a paraprofessional career in the human services area for economically disadvantaged adults who are at least twenty-two (22) years old and reside in the Worcester Consortium area.
Institutional Training	CETA Title I 100%	240	$253,000	To provide job training and employment opportunities to the economically disadvantaged, the unemployed, and the underemployed.
NAB/DES On-The-Job Training (OJT)	CETA Title I 100%	190	$333,975	To insure that disadvantaged people are placed in jobs requiring a skill and are trained in this skill by their new employers.
Law Offender Service Program (LOSP)	CETA Title I 100%	400	$50,100	Provides pre-employment services to economically disadvantaged ex-offenders.
Opportunities Industrialization Centers (OIC)	CETA Title I 100%	250	$122,100	To provide economically disadvantaged individuals with the proper background, knowledge, skills and awareness necessary to pursue vocational goals.
Public Service Employment	CETA Titles	[illegible]	$524,700	To provide employment in public and non-

PROJECTED CETA TRAINING

COURSE	SEC.	WKS.	TRAINING START	TRAINING ENDS	NO. OF TRAINEES	MIN. AGE	MIN. GRADE LEVEL	OTHER REQUIREMENTS
Cooking - H & R	*1* *2*	*24* *24*	*10/11/76* *4/4/77*	*3/25/77* *9/16/77*	*20* *20*	*17* *17*	*10* *10*	*Independent* *transportatio*
Bookkeeping	*1* *2*	*25* *23*	*10/11/76* *4/11/77*	*4/1/70* *9/16/77*	*15* *15*	*17* *17*	*10* *10*	*Good in Math.*
Patient Care Assistant	*1* *2*	*9* *9*	*3/7/77* *5/16/77*	*5/6/77* *7/15/77*	*12* *12*	*17* *17*	*9* *9*	*Work shifts* *Like people*
Welding	*1*	*20*	*3/14/77*	*7/29/77*	*16*	*18*	*10*	*Elementary Ma* *Measurements* *Physically Fi*
Sheet Metal Machine Operator	*1*	*20*	*4/4/77*	*8/19/77*	*20*	*18*	*10*	*Good in Math. & measurements*
Clerk - General Office	*1* *2* *3*	*16* *16* *16*	*10/18/76* *2/14/77* *6/13/77*	*2/4/77* *6/3/77* *9/30/77*	*20* *20* *20*	*17* *17* *17*	*10* *10* *10*	*Good in Englis and Math.*
Beginning Secretarial	*1* *2*	*26* *23*	*10/11/76* *4/18/77*	*4/8/70* *9/23/77*	*15* *15*	*17* *17*	*10* *10*	*Good in Englis* *45 w.p.m. typi* *good accuracy*

PROJECTED CETA TRAINING

COURSE	SEC.	WKS.	TRAINING START	TRAINING ENDS	NO. OF TRAINEES	MIN. AGE	MIN. GRADE LEVEL	OTHER REQUIREMENTS
English as a Second Language & Basic Ed.	1	24	10/11/76	3/25/77	25	17	6	Must be able to read and write in some language.
	2	24	4/4/77	9/16/77	25	17	6	
Offset Printing	1	17	10/11/76	2/4/77	15	17	10	Good in Math. Basic Measurements.
	2	17	2/14/76	6/10/77	15	17	10	

INVENTORY OF NON-CETA MANPOWER PROGRAMS

PROGRAM	FUNDING SOURCE	NUMBER SERVED	FUNDING LEVEL	TARGET POPULATION AND PROGRAM OBJECTIVE(S)
English-as-a-Second Language (ESL)	Adult Learning Center	600	341,000	Limited English speaking individuals will be provided ESL to enhance employment opportunities.
Opportunities Industrialization Centers (OIC)	60% Title I 40% OPCD (FY'77)	300-325 for FY '76	112,000 FY'75-76	Economically disadvantaged ages 18 and older. Prevocational training for economically disadvantaged in addition to job development.
Rent-A-Kid	90% City 10% Priv. Ind.	700 to 900	11,000	All youth between the ages of 14 - 21 to enhance opportunities for youth during summer months.
Youth Resource Bureau	LEAA 60% City 40%	200 +	98,000 FY'76	Delinquent and non-delinquent juveniles and other youth referred by community agencies ages 7 - 17. To provide preventative and rehabilatative counseling and related services to youth and their families.
More Machinists for Central Massachusetts (MMCM)	CETA and Private	60	114,000	Disadvantaged and non-disadvantaged 18 and over. Trains entry level machinists (40 week training).
O.I.C. Rental Sales Training Program	General Revenue Sharing 100%	100	10,000	Minorities, high school drop-outs and those with language difficulties a comprehensive sales training program to prepare economically disadvantaged or unemployed individuals in skillful techniques of Rental Sales.

INVENTORY OF NON-CETA MANPOWER PROGRAMS

PROGRAM (NON-CETA)	FUNDING SOURCE	NUMBER SERVED	FUNDING LEVEL	TARGET POPULATION AND PROGRAM OBJECTIVE(S)
O.I.C. Vocational Education Training Program	80% OPCD 20% Other	70	$80,000 OPCD 19,827 Oth.	Economically disadvantaged skilled training in areas of carpentry, plumbing and electrical work to be accomplished by provision of on-site training. Year-long program to renovate a building to be used as a training facility.
Mass. Rehabilitation	80% Federal (HEW) 20% State	Approx. 1,100	$16 million Statewide	Disabled population physical or mental disability. To help individual reach level of employability.
Work Incentive (WIN)	90% Federal (DOL) 10% State	4,950 registered indiv.	$776,100	Welfare recipients (AFDC) unemployed mothers and fathers who are head of household and their children 16 and older if they are not in school - so that they can be employed.
Adult Learning Center	50% Federal 50% LEA	2,800	$341,400	Anyone with less than a high school diploma - 16 years of age or above to obtain a high school diploma thru GED exam. To teach non-English speaking individuals to speak, read, and write the English language.
Adult Evening High School	LEA & tuition from non-City residents (avg. tuition per enrollee $2,000)	450	$30,000	Same as above.

The WIN program concentrates on helping welfare recipients in the Aid to Families with Dependent Children (AFDC) program. Its aim is to rehabilitate and move men, women and out-of-school youth 16 and over from welfare to regular employment. The WIN teams are working cooperatively with the CETA consortium staffs. A cumulative record of WIN activities in the LMA is given in the following table.

Table Y

WIN Team Data

Types of Service	July 1, 1975 to Sept. 30, 1976	Oct. 1, 1976 to Jan. 31, 1977
Registration	4,448*	3,463*
Appraisals	1,815	501
Orientation	4	0
Institutional Training	230	90
Work Experience	216	48
Suspense	121	88
On-The-Job Training	99	28
Entered Full Time Unsubsidized Employment	553	155

Source: WIN Department of Division of Employment Security
* Includes Carry Over From Prior Fiscal Year

The More Machinists for Central Massachusetts training program continues to receive support from Division of Employment Security and the Central Massachusetts Employers Association. All 14 of the January 1977 graduates of the course have been hired, with nine of them placed by positive recruitment. The fact that only six of the twelve companies who showed interest appeared for the positive recruitment seems to indicate that the peak of demand may have passed for the time being. However, fourteen applicants have been tested and selected for a new course starting in February. The course gives training on lathes, heavy machinery, grinding machines and milling machines.

To help staff the Upper Blackstone Water Pollution Abatement District's new $25 million sewage treatment plant, ten workers were trained in a 15 week course for waste water treatment operators. This course was made available by the New England Interstate Water Pollution Control Commission and sponsored by the Sacramento State College Training Program.

APPENDIX TABLE A

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS
FISCAL YEAR 1978
WORCESTER LMA

	Population	Labor Force	Employ	Unemploy	Unemploy Rate	Labor Force Participation Rate
TOTAL	384,661	191,557	177,556	14,001	7.3	67.8
White Male	183,981	110,731	102,537	8,194	7.4	83.6
0-15	51,519	-	-	-	-	-
16-17	7,718	5,805	4,977	828	14.3	75.2
18-19	7,718	5,997	5,055	942	15.7	77.7
20-24	17,103	15,175	13,749	1,426	9.4	88.7
25-34	23,547	23,062	21,743	1,319	5.7	97.9
35-44	17,884	17,303	16,320	983	5.7	96.8
45-64	40,448	38,532	36,369	2,163	5.6	95.3
65 +	18,044	4,857	4,324	533	11.0	26.9
White Female	195,204	78,359	72,877	5,482	7.0	53.5
0-15	48,720	-	-	-	-	-
16-17	7,119	5,555	4,890	665	12.0	78.0
18-19	7,119	5,172	4,884	288	5.6	72.7
20-24	16,646	11,877	11,251	626	5.3	71.4
25-34	23,729	12,834	12,096	738	5.8	54.1
35-44	18,831	11,685	11,092	593	5.1	62.1
45-64	45,150	27,596	25,558	2,038	7.4	61.1
65 +	27,890	3,640	3,106	534	14.7	13.1
Nonwhite Male	2,707	1,357	1,102	255	23.1	78.9
0-15	988	-	-	-	-	-
16-17	104	70	55	15	21.4	67.3
18-19	104	74	56	18	24.3	71.2
20-24	272	172	126	46	26.7	63.2
25-34	425	408	364	44	10.8	96.0
35-44	278	262	205	57	21.8	94.2
45-64	348	314	284	30	9.6	90.2
65 +	188	57	12	45	78.9	30.3
Nonwhite Female	2,769	1,110	1,040	70	6.3	63.2
0-15	1,013	-	-	-	-	-
16-17	108	68	68	0	0	63.0
18-19	109	85	85	0	0	78.0
20-24	206	135	125	10	7.4	65.5
25-34	407	322	289	33	10.2	79.1
35-44	313	197	182	15	7.6	62.9
45-64	346	226	214	12	5.3	65.3
65 +	267	77	77	0	0	28.8

APPENDIX TABLE B

ADDITIONAL UNEMPLOYMENT PROJECTIONS

FISCAL YEAR 1978
WORCESTER LMA

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number of Different Individuals Unemployed During Year
TOTAL	13,984	7.3	7,922	42,085
White Male	8,194	7.4	3,589	24,582
White Female	5,482	7.0	4,153	16,446
Nonwhite Male	238	17.5	83	714
Nonwhite Female	70	6.3	97	343

APPENDIX TABLE C

ADDITIONAL PLANNING DATA PROJECTIONS

FISCAL YEAR 1978

WORCESTER LMA

	Employed Part-Time for Economic Reasons
TOTAL	7,922
White Male	3,589
White Female	4,153
Nonwhite Male	83
Nonwhite Female	97

	Economically Disadvantaged 18 Years and Over
TOTAL	24,298
White	22,737
Black	1,129
Other	432
Spanish	322

APPENDIX TABLE D

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS
FISCAL YEAR 1978

WORCESTER CONSORTIUM

	Population	Labor Force	Employ	Unemploy	Unemploy Rate	Labor Force Participation Rate
TOTAL	303,011	152,767	142,117	10,650	7.0	68.1
White Male	144,283	87,986	81,519	6,467	7.4	84.0
0-15	39,547	-	-	-	-	-
16-17	6,067	4,873	4,045	828	17.0	80.3
18-19	6,068	4,982	4,018	964	19.3	82.1
20-24	13,644	12,330	11,431	899	7.3	90.4
25-34	18,833	18,682	17,570	1,112	6.0	99.2
35-44	13,722	13,682	13,009	673	4.9	99.7
45-64	31,978	29,612	27,977	1,635	5.5	92.6
65 +	14,424	3,825	3,469	356	9.3	26.5
White Female	153,601	62,745	58,823	3,922	6.3	53.9
0-15	37,298	-	-	-	-	-
16-17	5,532	4,511	4,111	400	8.9	81.5
18-19	5,533	4,064	3,794	270	6.6	73.5
20-24	13,330	9,981	9,557	424	4.2	74.9
25-34	18,679	9,907	9,468	439	4.4	53.0
35-44	14,816	9,237	8,727	510	5.5	62.3
45-64	35,852	22,032	20,514	1,518	6.9	61.5
65 +	22,561	3,013	2,652	361	12.0	13.4
Nonwhite Male	2,548	1,107	907	200	18.1	68.2
0-15	926	-	-	-	-	-
16-17	95	58	42	16	27.6	61.1
18-19	96	17	17	0	0	17.7
20-24	265	144	106	38	26.4	54.3
25-34	403	348	307	41	11.8	86.4
35-44	260	238	180	58	24.4	91.5
45-64	324	253	241	12	4.7	78.1
65 +	179	49	14	35	71.4	27.4
Nonwhite Female	2,580	929	868	61	6.6	56.8
0-15	945	-	-	-	-	-
16-17	101	56	56	0	0	55.4
18-19	102	69	69	0	0	67.6
20-24	191	117	110	7	6.0	61.3
25-34	386	274	246	28	10.2	71.0
35-44	288	159	145	14	8.8	55.2
45-64	316	190	178	12	6.3	60.1
65 +	251	64	64	0	0	25.5

APPENDIX TABLE E

ADDITIONAL UNEMPLOYMENT PROJECTIONS

FISCAL YEAR 1978

WORCESTER CONSORTIUM

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number of Different Individuals Unemployed During Year
TOTAL	10,650	7.0	2,997	32,781
White Male	6,467	7.4	2,204	19,401
White Female	3,922	6.3	703	12,590
Nonwhite Male	200	18.1	84	600
Nonwhite Female	61	6.6	6	190

APPENDIX TABLE F

ADDITIONAL PLANNING DATA PROJECTIONS

FISCAL YEAR 1978

WORCESTER CONSORTIUM

	Employed Part-Time for Economic Reasons
TOTAL	6,102
White Male	2,853
White Female	3,118
Nonwhite Male	55
Nonwhite Female	76

	Economically Disadvantaged 18 Years and Over
TOTAL	22,126
White	20,914
Black	876
Other	336
Spanish	251

APPENDIX TABLE G

PREPARED BY: RESEARCH & INFORMATION SERVICE
MASSACHUSETTS DIVISION
OF EMPLOYMENT SECURITY

WORCESTER LABOR AREA

1970	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN AVG
EMPLOY	156600	155700	154300	159200	158900	160800	155200	152900	155900	157600	155800	154900	156500
UNEMPLOY	6400	6800	6600	6700	7300	9200	9300	9400	7900	7800	9200	10100	8100
LABOR FORCE	163000	162500	160900	165900	166200	170000	164500	162300	163800	165400	165000	165000	164600
UNEMP RATE	3.9	4.2	4.1	4.0	4.4	5.4	5.7	5.8	4.8	4.7	5.6	6.1	4.9
1971													
EMPLOY	150100	147900	150300	151900	150700	151700	146600	147400	150600	153000	154300	155300	150800
UNEMPLOY	11200	12600	12300	12800	13600	15800	14900	13400	11400	10300	11400	13000	12700
LABOR FORCE	161300	160500	162600	164700	164300	167500	161500	160800	162000	163300	165700	168300	163500
UNEMP RATE	6.9	7.9	7.6	7.8	8.3	9.4	9.2	8.3	7.0	6.3	6.9	7.7	7.8
1972													
EMPLOY	150600	152300	155000	157200	156400	159800	159000	159600	159900	163000	161600	162600	158100
UNEMPLOY	11800	12600	13400	13100	10400	10900	11700	10100	9200	8900	8600	9500	10900
LABOR FORCE	162400	164900	168400	170300	166800	170700	170700	169700	169100	171900	170200	172100	169000
UNEMP RATE	7.3	7.6	8.0	7.7	6.2	6.4	6.9	6.0	5.4	5.2	5.1	5.5	6.4
1973													
EMPLOY	159400	160400	161200	161200	162400	163900	159900	160400	163700	166000	165300	167100	162600
UNEMPLOY	12000	12300	11800	11700	10500	11700	11900	10700	9700	9600	9700	10800	11000
LABOR FORCE	171400	172700	173000	172900	172900	175600	171800	171100	173400	175600	175000	177900	173600
UNEMP RATE	7.0	7.1	6.8	6.8	6.1	6.7	6.9	6.3	5.6	5.5	5.5	6.1	6.3
1974													
EMPLOY	165200	166000	162800	166500	167600	168800	164500	166900	169000	170200	172400	170200	167500
UNEMPLOY	11400	11800	11600	10800	9500	11200	11900	11100	10300	10500	11200	12900	11200
LABOR FORCE	176600	177800	174400	177300	177100	180000	176400	178000	179300	180700	183600	183100	178700
UNEMP RATE	6.5	6.6	6.7	6.1	5.4	6.2	6.7	6.2	5.7	5.8	6.1	7.0	6.3
1975													
EMPLOY	168000	165900	164400	165000	165600	165800	163400	164300	167000	168800	170400	166200	166200
UNEMPLOY	17200	19000	20900	19600	22200	24900	23800	22700	21800	21300	20500	19700	21100
LABOR FORCE	185200	184900	185300	184600	187800	190700	187200	187000	188800	190100	190900	185900	187300
UNEMP RATE	9.3	10.3	11.3	10.6	11.8	13.1	12.7	12.1	11.5	11.2	10.7	10.6	11.3
1976													
EMPLOY	167300	167200	167500	169200	169800	169900	166200	167700	171100	172300	173100	174700	169700
UNEMPLOY	21400	21000	21400	19100	18100	18100	18200	16700	15000	13500	12700	13500	17400
LABOR FORCE	188700	188200	188900	188300	187900	188000	184400	184400	186100	185800	185800	188200	187100
UNEMP RATE	11.3	11.2	11.3	10.1	9.6	9.6	9.9	9.1	8.1	7.3	6.8	7.2	9.3

APPENDIX TABLE II

APPENDIX TABLE II

REVISED 1976 DATA

STATE OF MASSACHUSETTS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN AVG
EMPLOY	2424100	2432600	2458800	2485200	2515000	2530700	2511000	2525300	2529400	2524900	2526100	2525000	2499000
UNEMPLOY	322400	316900	304500	281000	267700	275800	275800	250000	230800	217800	205300	208000	263000
LABOR FORCE	2746500	2749500	2763300	2766200	2782700	2806500	2786800	2775300	2760200	2742700	2731400	2733000	2762000
UNEMP RATE	11.7	11.5	11.0	10.2	9.6	9.8	9.9	9.0	8.4	7.9	7.5	7.6	9.5
SEAS.ADJUS	10.8	10.3	10.1	10.0	10.1	9.4	9.2	9.4	9.1	8.9	8.3	8.1	9.5

WORCESTER LABOR MARKET AREA

EMPLOY	167300	167200	167500	169200	169800	169900	166200	167700	171100	172300	173200	174700	169700
UNEMPLOY	21400	21000	21400	19100	18100	18100	18200	16700	15000	13500	12700	13500	17400
LABOR FORCE	188700	188200	188900	188300	187900	188000	184400	184400	186100	185800	185900	188200	187100
UNEMP RATE	11.3	11.2	11.3	10.1	9.6	9.6	9.9	9.1	8.1	7.3	6.8	7.2	9.3

UNITED STATES UNEMPLOYMENT RATE

SEASONAL & ADJUSTED	7.8	7.6	7.5	7.5	7.3	7.6	7.8	7.9	7.8	7.9	8.0	7.8	7.7
UNADJUSTED	8.8	8.7	8.1	7.4	6.7	8.0	7.8	7.6	7.4	7.2	7.4	7.4	7.7

MASS. MA 30.27: Wo/1979

ANNUAL PLANNING INFORMATION REPORT FISCAL YEAR 1979

JOHN F. HODGMAN, DIRECTOR, AFFILIATED WITH

MASSACHUSETTS DIVISION OF EMPLOYMENT SECURITY,

EMPLOYMENT AND TRAINING ADMINISTRATION, U.S. DEPARTMENT OF LABOR

U OF MASS/AMHERST LIBRARY

GOVERNMENT DOCUMENTS
COLLECTION
JUL 6 1978
University of Massachusetts

WORCESTER LMA

JOB
SERVICE

ANNUAL PLANNING INFORMATION REPORT

FISCAL YEAR 1979

WORCESTER, MASSACHUSETTS
LABOR MARKET AREA
AND
CETA PRIME SPONSOR CONSORTIUM

Prepared by: Bruce E. Searleman
Senior Labor Market Economist
Labor Area Research Department
Massachusetts Division of
Employment Security
Charles F. Hurley Building
Government Center
Boston, Massachusetts 02114

Foreword

I would like to thank all of the people who provided information for this report. These include Ed McTigue of the Central Massachusetts Regional Planning Commission, Tom Brennan and David Worth of the City Manager's Office of Planning and Community Affairs, Stan Weinbaum at Hopedale CETA, Robert Millett and Sam Swisher at Marlboro CETA and Tim Suher at Worcester CETA. Special thanks for their cogent analyses of the Worcester area's economy are accorded to Mr. Robert B. Newcomb of the Worcester Area Chamber of Commerce, Professor Roger C. Van Tassel of Clark University, whose comments I adapted from an April 1978 article in the Worcester Evening Gazette, and last but not by any means least, Mr. Walter S. Frank of Walden Associates in Cambridge, whose analysis of Worcester area industrial conditions first set me on the right track.

I take full responsibility for any errors of fact, interpretation, analysis and/or prediction contained in this report.

Bruce E. Searleman
Bruce E. Searleman
Spring 1978

TABLE OF CONTENTS

Page

Foreword.. i

I. Highlights and Conclusions....................... 1

II. Description of Area
- a. Definition of Area........................... 3
- b. Population and Labor Force Trends............ 3

III. Unemployment Trends and Characteristics.......... 5

IV. Employment Service Unfilled Job Openings......... 8

V. Employment Developments and Outlook by Industry................................... 8

VI. Employment Developments and Outlook by Occupation................................. 12

VII. Estimate of Need for Manpower Services........... 15

Map

Map of Worcester Labor Market Area and Consortium.. 2

List of Tables

Estimated Unemployment Rates by Sector and Industry Worcester Labor Market Area....................... 6

Relative Percentages of Benefit Check Recipients At DES Offices in the Worcester LMA by Age and Sex March 1978 and October 1977....................... 7

Job Orders Received and Filled - Compiled From ESARS Worcester Job Bank October 1, 1977 Through February 28, 1978.......... 13

TABLE OF CONTENTS
(continued)

Page

List of Tables (continued)

Job Applicants Available and Job Placements Made Worcester Job Bank October 1, 1977 Through February 28, 1978............ 15

Appendix Tables

(Fiscal Year 1979 Projections)

Labor Market Area - Population-Labor Force........... 18

Labor Market Area - Unemployment...................... 19

Labor Market Area - Other Data........................ 20

CETA Consortium Area Population and Labor Force........................... 21

CETA Consortium Area Unemployment................... 22

CETA Consortium Area - Other Data...................... 23

I. Highlights and Conclusions

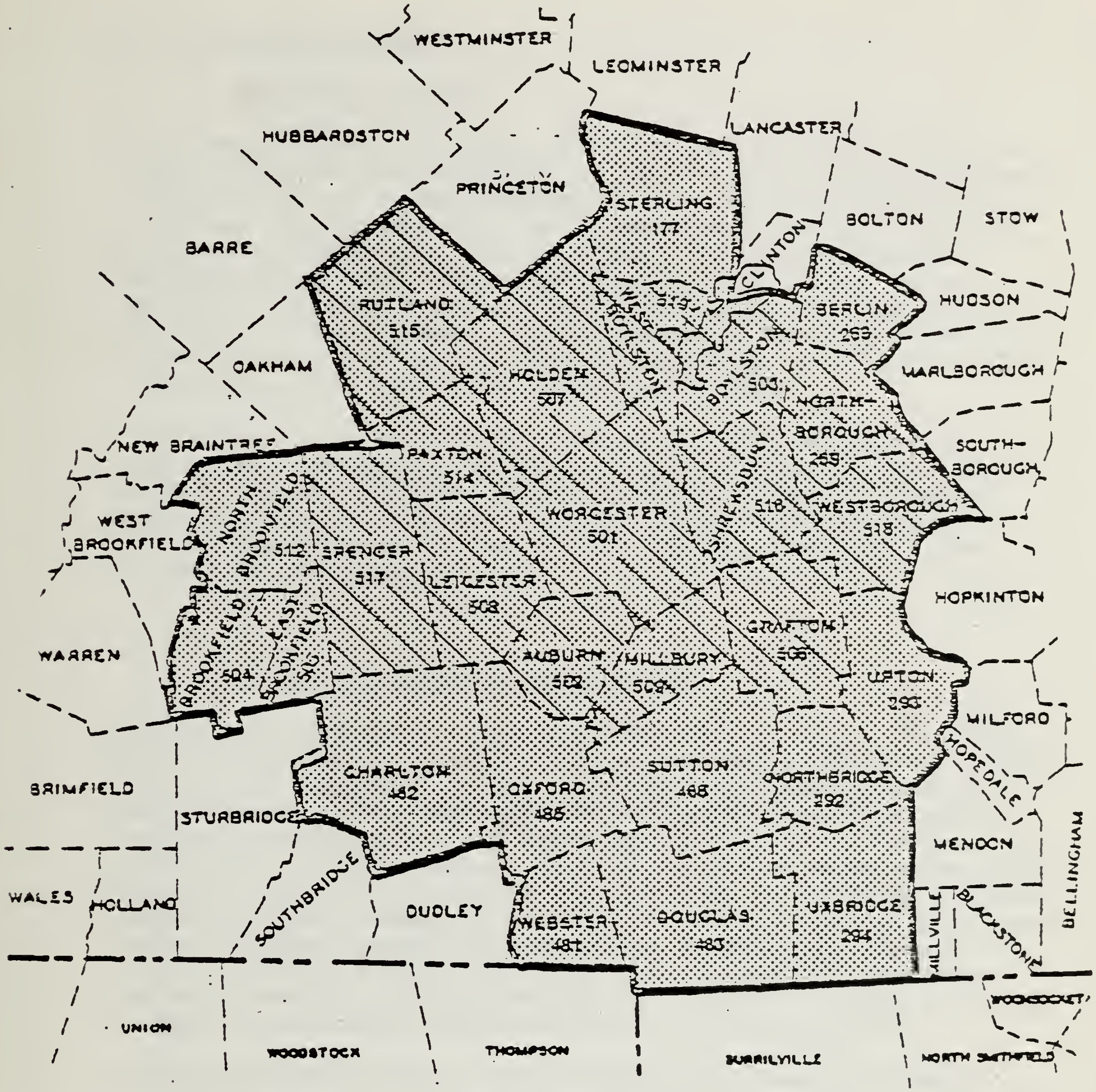
The Worcester Labor Market Area registered major gains in employment, capital investment and earnings during 1977 and appears well on its way to shaking off all adverse effects of the recent national recession. The manufacturing sector recorded very sizeable expenditures on new plants and equipment, although most of the actual growth in employment took place in nonmanufacturing, where payrolls reached an all-time high in December.

Construction of the University of Massachusetts Medical School, the new $5 million industrial park at Worcester Airport and the $14.9 million Civic Center along with a successful Industrial Revenue Bond program and extensive ongoing plans to provide better interstate road transportation between the local area and other parts of the state all bode well for the region's economic future. Planners, however, must be diligent in promoting new business ventures, and especailly of continuing research and development of new technologically sophisticated products by firms already well established in the area. This is necessary in order to maintain the area's manufacturing base in the face of competition from other parts of the country (and abroad) where manufacturing costs are lower and hence more attractive to "mature" industries. Fortunately the area possesses the financial resources as well as the technical and managerial expertise to pursue this strategy successfully.

Area economic growth should be strong enough during the next few years to enable the private sector to generate enough jobs for almost all who want them. The goal of local manpower planners will therefore not be to create employment slots per se, but to upgrade areawide job skills sufficiently to service an increasingly affluent and technically oriented economy.

WORCESTER LABOR AREA

and CONSORTIUM



THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

Consortium
▨
area

March 1975

II. Description of Area

a. Definition of Area

The Worcester Labor Market Area is located entirely within Worcester County in central Massachusetts. It contains only one city, Worcester, the second largest in the Commonwealth of Massachusetts, and twenty-six towns. They are Auburn, Berlin, Boylston, Brookfield, Charlton, Douglas, East Brookfield, Grafton, Holden, Leicester, Millbury, Northboro, Northbridge, North Brookfield, Oxford, Paxton, Rutland, Shrewsbury, Spencer, Sterling, Sutton, Upton, Uxbridge, Webster, Westboro, and West Boylston. The population of the Labor Market Area at the time of the 1975 state census was 385,583, up 1.9 percent from the 378,289 at the time of the 1970 federal census.

The Worcester area is also the location of a CETA Prime Sponsor Consortium. Communities included are Worcester, Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Northboro, Paxton, Rutland, Shrewsbury, Spencer, Westboro, and West Boylston. The population of this consortium in 1975 was 306,620, roughly, (80 percent) that of the Labor Market Area.

b. Population and Labor Force Trends

Hard data on population trends in Central Massachusetts is available only to 1975, when the last State Census was taken. Analyses of trends after 1975 is therefore at best conjectural and involves such roundabout methods as using national survival rate ratios and surveying housing starts, growth in the demand for public utility services, etc. In addition, migration pattens into and out of the region cannot properly be taken account of without more hard data than is currently available concerning them. Finally, linear or other extrapolations of past trends cannot at present be used with any degree of confidence because the effects of the post World War II baby boom is rapidly disappearing and net growth due to this phenomenon will not be a significant factor in determining overall population levels in the near future.

Actual population growth in the Worcester LMA between 1970 and 1975 is itself uncertain. Estimates made by public agencies for the area vary between 0.5 percent to 2.5 percent over the period and it is impossible to say which of these extremes is closer to the truth. Hence, assuming migration

patterns to remain as they have been so far in the decade and taking into account declining growth due to the disappearance of baby-boom demographic effects, it seems best to assume a 1.0 percent increase in growth between the 1975 State Census and fiscal year 1979, for which population estimates in this report are to be made. National survival rates will further break this overall total down by sex and age-group in the first table to be found in the appendix.

Up-to-date annual average labor force data for the Worcester Labor Market Area are available for the years 1974 through 1977 and are continuously revised by the Division of Employment Security. Despite what is presumed to be virtual stagment population growth during this interval, the area's labor force is estimated to have grown by 12,200 to 180,500 for 1977, an average yearly increase of 1.8 percent. This seemingly large increase is primarly due to the continuing rise in the labor force participation rate of young females who no longer stop working automatically upon marriage and frequently maintain their employment even after bearing children. Likewise, females are even more likely to re-enter the labor force when their offspring are grown or to supplement family income increasingly ravaged by inflation. While overall female labor force participation rates are likely to remain high in the foreseeable future, further large increases cannot be expected. Worcester area planners, however, believe the area's labor force can be significantly increased by improving road transportation within the area and from surrounding areas and expect completion of Routes 52 and I-190 and the expansion of Interstate Route 290 to provide a new source of labor to local firms from areas ranging as far north as Fitchburg-Leominster and as far south as northern Connecticut (longer range plans envisage improved transportation to and from the Ware area as well). Taking both of these factors into account, it would appear that the overall labor force should grow by about another 3.0 percent over the annual average of 1977 to the average for fiscal 1979. Breakouts by age and sex can be made by using estimates of labor force participation rates for different groups and 1970 census figures may be used for breakouts by race (the racial composition of the area is not believed to have changed significantly during the decade).

For March 1978 the unemployment rate for the Worcester LMA is 5.2 percent of its labor force, exactly one full percentage point below that for the state as a whole. National economic forecasters expect to see unemployment begin to rise by the end of calendar 1978 and therefore an increase in local unemployment rates can also be expected, though the Worcester area economy has proven itself to be resilient in

past recessions and fared reasonably well during the last downturn. A fair appraisal of economic prospects in the area therefore leads to an overall estimated unemployment rate of 6.1 percent for fiscal 1978, though some demographic groups will fare better than others during the period. Estimates of unemployment by age, race and sex are available from surveys of claim records for March 1978 and from 1970 census data and therefore breakouts of overall figures may be derived for unemployment for these groups, and for employment in each case as a residual of labor force less unemployed.

Taken as a whole then, the estimates have been used to derive the demographic manpower profile of the Worcester Labor Market Area, as well as for the Worcester CETA Consortium, given in the Appendix.

III. Unemployment Trends and Characteristics

Seasonal variations and sampling errors aside, the unadjusted unemployment rate for the Worcester area has decreased steadily over the last twelve months and now stands at 5.2 percent (for March 1978) down from 7.3 percent for March 1977. The decrease was broadly based, moreover, so much so that every major industry in the local labor market, with the sole exception of chronically depressed contract construction, had markedly improved its labor market performance -- as the table on the following page of unemployment rates, estimated by using DES claim record surveys, clearly demonstrates:

Estimated Unemployment Rates
By
Sector and Industry
Worcester LMA

Sector or Industry	Unemployment Rate March 1978	Unemployment Rate March 1977
Overall	5.2	7.3
Manufacturing	4.3	7.5
Durable Goods	4.3	6.4
Nondurable Goods	4.2	9.5
Nonmanufacturing	5.5	7.2
Construction	52.3	39.9
Trade	3.6	7.2
Services	2.5	3.9
Government	1.5	4.1
Other Nonmanufacturing	5.1	6.6

Unemploymemt dropped fastest in industries where pay rates are relatively low, particularly trade and nondurable manufacturing. Relative unemployment decreases fastest of all in government because temporary hirees under the Comprehensive Employment and Training Act were better able to find other jobs upon termination of their contracts than they had been a year earlier. General economic improvement had relatively little impact on "other nonmanufacturing" industries (such as banking, insurance, communications, and public utilities), however, because of economic development in them tend to lag behind those in other sectors.

Were it not then for the continuing difficulties experienced by contract construction operatives, the Worcester LMA's labor market would be quite close to experiencing full employment. While it is true that the seasonal nature of this industry makes it difficult to evaluate unemployment rates in particular months, by any standard the rate is far too high and there can be little doubt that construction will continue to be a severely depressed industry for the forseeable future, as it has been in the area and throughout the state since 1973.

Since little hard data is available for the Worcester area on employment by age and sex, it is not possible to estimate unemployment rates by demographic categories. However, surveys of DES claim records do enable us to infer which of these groups have benefited most from economic recovery in recent months.[1]

Relative Percentages Of
Benefit Check Recipients
At
DES Offices in the Worcester LMA
By Age and Sex
March 1978 and October 1977

Age Group	March 1978 Total	March 1978 Male	March 1978 Female	October 1977 Total	October 1977 Male	October 1977 Female
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
16 - 24	11.7	11.0	13.5	16.3	19.5	12.4
25 - 34	23.8	24.3	22.6	20.0	18.9	21.3
35 - 44	17.0	17.2	16.3	16.7	17.7	15.6
45 - 64	41.1	41.2	40.8	34.7	27.5	43.3
65 and over	6.4	6.3	6.8	12.3	16.4	7.4

The table demonstrates a clear dichotomy between unemployment trends for men and women over the period indicated. Teenage and elderly males found their relative employability increasing markedly as the area's economic recovery progressed into 1978, while no such pattern developed for women. In effect, recovery in the local labor market area has progressed to the point where jobs have once again become generally available to heretofore only marginally employable males. Trends for females were less distinct but appear to point to some increase in job opportunities for prime age and older women, who need jobs to supplement family incomes to counterbalance the effects of inflation. In doing this, many of these women are forced to take low-paying jobs in the trade, service and software manufacturing industries, which have little career potential. On balance, then, unemployment trends by demographic category show that recent labor market improvements engendered by economic recovery in the Worcester Labor Market Area have proven to be of more overall benefit to men than to women.

IV. Employment Service Unfilled Job Openings

At present, economic requirements in the local labor market generate the greatest demand for the occupational skills of nurses, especially Registered Nurses (RN's), and medical technologists. Electronic technicians are also in short supply because the occupation is new to the area, requires a great deal of specialized training, and especially because of the rapid growth electronics firms throughout Central Massachusetts. There is also considerable demand for skilled machinists (as opposed to simple machine operators) who can design, build and repair old and new equipment. Meanwhile the occupational skills of cloth stitchers and leather stitchers are in considerable demand because young workers are not interested in entering either of these occupations because long-term job prospects in both are poor. Finally, the local area has both an excess demand and an excess supply of clerk typists because prospective employers do not judge available job applicants to be sufficiently qualified to hire.

V. Employment Developments and Outlook by Industry

By any measure 1977 proved to be an exceptionally robust year for industrial growth and expansion within the Worcester Labor Market Area. At the end of the year a total of more than $16 million in industrial revenue bonds for local manufacturing installations had been approved or were under consideration by the Industrial Revenue Financing Authority, and this sum represented only a small fraction of the funds area firms had themselves earmarked for capital expansion. Additional manufacturing capital was also being used to fund several other large development projects, most notable the $5 million industrial park near the Worcester airport that is expected upon completion in late summer 1978 to provide as many as 18 new industrial sites for sale or lease to local entrepreneurs. Meanwhile, growth of employment in the area's nonmanufacturing sector was so strong that by December overall payrolls had reached all-time record levels. Here too there were several important development projects approved and funded over the year, most notably the $14.9 million Worcester Civic Center, which itself sparked a number of related spinoff projects expected to lead to a significant boost in the vitality of the city's downtown commercial area.

Further details and analysis of these and other industrial events in the local area during the past calendar year can be found in the Fourth Quarter 1977 Labor Market Information Review for the Worcester Labor Market Area published by and available from the Labor Area Research Department of the Division of Employment Security.

Short-term economic developments in the local area are heavily dependent on national and even international economic influences. Most economists expect nationwide unemployment for 1979 to be significantly higher than it is now, if only because recurring double-digit inflation will probably force restrictive fiscal and monetary measures to be taken by the Administration and the Federal Reserve Board respectively. The Worcester economy proved during the last recession that its diversity and fundamental strength give it a substantial degree of resilience in the face of economic adversity, yet it cannot be expected to entirely escape the effects of reduced economic activity in the country as a whole. Hence diminished national demand for locally produced goods and services should lead to layoffs in most industries, though the impact will be much more severe in some quarters than in others. Unemployment will rise fastest in softgoods manufacturing, which traditionally bears the brunt of local economic downturns. Employment will also drop off in the hardgoods sector, but advanced technology in these industries makes them less vulnerable to recessionary forces than is true for softwares. Economic multiplier effects will in turn lead to larger relative job losses among cyclically sensitive service and wholesale and retail trade firms than for those in other nonmanufacturing industries. However, total unemployment in the LMA should increase by no more than one percentage point, barring major unforseen developments, such as crop failures, natural disasters affecting economic production, prolonged labor disputes in key national industries, large price increases in imported petroleum or other important raw materials, etc., but if these occur singly or in combination, they could induce yet another national recession.

If the short-term economic outlook for the local area is cloudy, long-run projections yield a picture which is bright indeed. The same financial, economic and technological factors which have combined to give the Worcester LMA the lowest unemployment rate of any large area in the state will continue in the foreseeable future to operate to improve its relative position still further. In fact, the Worcester area economy is the one in Massachusetts most uniquely suited to taking advantage of changing economic conditions over the next few years.

The Worcester LMA has had its share of manufacturing job losses due to contractions, bankruptcies and movements of firms out of state to areas perceived to be more congenial to their growth and profitability. Firms in software industries such as textiles and apparel were generally most vulnerable to the economic forces which forced them to cease operations in Massachusetts, but mature, technologically stagnant, hard-goods enterprises were also susceptible to them -- as exemplified by the recent closing of the Electrical Cable Division of U. S. Steel in Worcester. However, the exodus of such firms should soon come to an end, since few manufacturing firms now operating in Central Massachusetts are vulnerable to the forces which affected these others. Worcester area enterprises use advanced technologies and employ highly skilled workers generally not available elsewhere in equal quantity or variety. The local financial infrastructure of commercial banks and insurance companies are not only able to supply funds for expansion and development projects of all kinds but are willing to take risks on new and uncertain business ventures. In this they are supported by a highly efficient network of economic and community planning agencies which collectively have been in the vanguard of revitalizing both the city itself, and the whole LMA through a number of highly productive civic, community development and transportation projects.

In effect, the rosy picture of the Worcester area's economic future is due to two different sets of factors. Thus, part of the future growth and development will come from projects sponsored by public or quasi-public agencies such as the development agencies and the Worcester Chamber of Commerce. As an example, the completion of the University of Massachusetts Medical School not only produces direct economic benefits in terms of jobs and income but can also be expected to spur suppliers of ancillary medical equipment and services to locate nearby. Likewise, the Worcester Civic Center should lead not only to an general improvement in employment and sales throughout the downtown Worcester business district by attracting people to the area, but should also produce such beneficial fringe benefits as markedly decreasing property tax burdens among city residents. The recent restoration and enlargement of Mechanics Hall serves many of the same purposes, though on a smaller scale. Public agencies have also had a major role in developing Worcester's Airport Industrial Park and acquiring funding for expansion of such important interstate arteries as Route I-290 from the Fitchburg-Leominster area south to the Connecticut line - which increases the labor force available for area economic growth at the same time as it facilitates transportation of raw materials and finished products throughout the state and to other states in the Northeast.

At least as important as these public and quasi-public agencies are in fostering economic developments, most of the actual growth must be initiated by individual private enterprises themselves, and the Worcester area gain is better able than most others in state in doing this, due to its proximity to major scientific, engineering and business schools and the sizeable financial resources available to new and old local enterprises from area banks. But more than other areas, Worcester has long recognized that continued prosperity and growth cannot be ensured without constantly striving to develop new industries and create new product lines for those already locally established.

The best exposition of this phenomenon was given by Clark University economics Professor Roger C. Van Tassel, speaking at the Northeast Municipal Economic Development conference held last April in Worcester. Dr. Van Tassel noted that, compared with other parts of the country, New England is not only resource poor but also presents current and prospective private sector employers with higher labor, tax, energy and transportation costs than firms elsewhere in the country are forced to deal with. Thus, once production processes are firmly established, local manufacturing firms have an incentive to relocate in areas where overall production costs are lower, so it is not surprising that the Northeastern states find themselves facing a continuing exodus of mature manufacturing enterprises to other sections of the country, most especially to the so-called "sun belt". New manufacturing industries and those which are experiencing fast-moving technological changes, on the other hand, find themselves most in need of a stable supply of skilled workers and access to technical aid from specialized business and engineering consultants available nearby, as they so abundantly are in and around the Worcester LMA. Thus to maintain a viable manufacturing base in the local area it is vital that new and technologically advanced industries be encouraged to locate here and that the financial, consultational, skilled labor and administrative resources necessary for their nurture be readily accessible to them. When surviving firms mature they too will probably leave the area to be replaced by new enterprises making still more technically advanced products, but only if the Worcester LMA maintains its attractiveness to such technologically advanced endeavors.

While the continued vigor of its manufacturing sector is essential if the vitality of the LMA's economy is to be maintained, most of the actual employment growth will take place in nonmanufacturing, continuing a long-term trend that has been particularly pronounced during the present decade. It is not only the impact of automation on manufacturing production processes which is causing this trend, but the naturial tendency of consumers to demand a greater quantity and variety of all categories of nonmanufacturing services as a nation's per capita income rises. Moreover, the manufacturing sector itself requires more specialized management consulting and other business services to remain competitive when designing, producing and selling ever more technically sophisticated products. Likewise, nonmanufacturing is far less vulnerable to foreign competition than manufacturing enterprises. For all of these reasons almost all new employment growth in the local area will be in the nonmanufacturing sector, although it is of paramount importance that public officials do all that is in their power to maintain a healthy manufacturing base in Central Massachusetts by fostering research and development of new lines of products from both new firms and especially among ones already firmly established in the region.

VI. Employment Developments and Outlook by Occupation

Now that the local economy has shaken off most of the effects of the recent recession, profiles of job skill categories are presently in great demand by employers and of job applicants who cannot find work should give a good indication of the Worcester LMA's occupational requirements for fiscal 1979. The following compilation of job orders received and filled by major occupational category at the Worcester Job Bank during the current fiscal year (from Employment Service Automated Reporting System (ESARS reports) has been composed for this purpose:

Job Orders Received and Filled
Compiled From ESARS
Worcester Job Bank
October 1, 1977 Through February 28, 1978

DOT	Major Industrial Category	Openings Received		Openings Filled	
		Number	Percent	Number	Percent
	TOTAL	4,908	100.0	3,243	100.0
0-1	Professional, Technical and Managerial	629	12.8	359	11.1
2	Clerical and Sales	905	18.4	522	16.1
3	Service	868	17.7	567	17.5
4	Farming, Fishing and Forestry	44	0.9	63	1.9
5	Processing	183	3.7	139	4.3
6	Machine Trades	470	9.6	249	7.7
7	Bench Work	396	8.1	278	8.6
8	Structural Work	379	7.7	271	8.3
9	Miscellaneous	1,034	21.1	795	24.5

No gross imbalance is evident for any occupational category, though there appears to be a slight shortage of clerical and sales personnel needed primarily in the nonmanufacturing sector, which grew strongly during the last quarter of 1977 and the first quarter of 1978. Machine trade workers were also in demand, reflecting a long-standing statewide shortage of skilled machinists capable of designing, assembling and repairing sophisticated equipment. On the other side, workers in miscellaneous group occupations found it hardest to find jobs, mainly because most work in low-paying secondary labor market occupations is characterized by high labor turnover, a situation also true but to a lesser degree in processing occupations. Farming, fishing and forestry workers also found it difficult to find work. However, they will undoubtedly find improved prospects with the onset of warmer weather.

During the next eighteen months demand for the job skills of medical personnel, typists, secretaries and other clerical help, skilled machinists and other highly trained manufacturing operatives will be particularly high, while teachers and construction workers will have the hardest time making productive use of their work skills. In the long-run, all nonmanufacturing sector personnel, except possibly construction workers, will be needed in increasing numbers throughout the Worcester LMA. At the same time demand for softgoods manufacturing help will be in decline while demand for hardgoods personnel will be holding steady or increasing slightly, as it has for the last several years. In general demand will increase by the greatest amount for individuals who have the sophisticated professional, technical and managerial work skills necessary to support the area's burgeoning technically advanced hardgood manufacturing industries and nonmanufacturing infrastructure.

VII. Estimate of Need For Manpower Services

A profile of the demographic and economic characteristics of individuals most in need of manpower services can be derived from ESARS tables by comparing the relative numbers of individuals applying for job-related services with the relative number of those actually placed for each category in question. Figures derived from current ESARS tables allowing these comparisions to be made have been tabulated below:

Job Applicants Available
and
Job Placements Made
Worcester Job Bank
October 1, 1977 Through February 28, 1977

Characteristics of Unemployed	Job Applicants Available Percent	Job Placements Percent
Under Age 20	12.0	17.4
Over Age 44	17.9	13.5
Male	56.1	64.8
High School Dropout	37.8	37.5
Nonwhite	5.9	10.9
Spanish American	5.7	8.0
Veteran	16.7	20.3
Vietnam Era	2.0	3.4
Handicapped	5.4	5.0
Economically Disadvantaged	35.7	35.6

Placement rates are markedly low only for females and for applicants over age 44. Area employers do not, according to data contained in the table, discriminate against individuals on the basis of their race, lack of education,(for men)wartime military service, physical handicaps or poverty. Of course nothing in the table gives any indication of the desirability of the jobs acquired in terms of pay rates, labor turnover, working conditions, etc. In fact the relatively high placement rate for teenagers probably reflects high turnover rates and nothing more, though at least those under 20 are usually able to find work (unlike many women and job seekers past prime working age).

Previous sections of this report have forecast a rosy future for the Worcester LMA's economy. Thus there will be somewhere in the local labor market jobs for everyone who is able and willing to work and even those demographic groups, specifically older workers and women, who now have trouble finding employment should have far less difficulty in the future as the local economy continues to grow (in fact area economic planners are worried about the adverse effects expected labor shortages will have on future expansion). Therefore the great challenge facing manpower planning agencies such as CETA and the DES Employment Service is not one of creating jobs per se but of upgrading the general level of job skills of people in the labor force not only to enable individuals to acquire secure meaningful and high-paying work but also to provide the occupational skills necessary to support the expected future growth of the Worcester LMA's increasingly affluent and technologically sophisticated economic system.

APPENDIX TABLES

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS
FISCAL YEAR 1979

Worcester LMA

	Population	Labor Force	Employ	Unemploy	Unemploy Rate	Labor Force Participation Rate
TOTAL	389439	199207	187055	12152	6.1	69.6
White Male	186152	114770	106303	8467	7.4	85.6
0-15	52074	--	--	--	--	--
16-17	7799	5711	4627	1084	19.0	73.2
18-19	7800	6111	4849	1262	20.7	78.3
20-24	17344	14905	13728	1177	7.9	85.9
25-34	23794	23149	21693	1456	6.3	97.3
35-44	18073	17566	16684	882	5.0	97.2
45-64	41034	39321	37181	2140	5.4	95.8
65 +	18234	8007	7541	466	5.8	43.9
White Female	197659	82173	78792	3381	4.1	55.4
0-15	49244	--	--	--	--	--
16-17	7204	6001	5656	345	5.7	83.3
18-19	7204	5528	5295	233	4.2	76.7
20-24	16860	12556	12191	365	2.9	74.5
25-34	23977	13920	13542	378	2.7	58.1
35-44	19094	12527	12088	439	3.5	65.6
45-64	45782	28945	27636	1309	4.5	63.2
65 +	28294	2696	2384	312	11.6	9.5
Nonwhite Male	2783	1256	998	258	20.5	71.1
0-15	1017	--	--	--	--	--
16-17	105	67	33	34	50.7	63.8
18-19	106	22	14	8	36.4	20.8
20-24	280	162	119	43	26.5	57.9
25-34	436	391	328	63	16.1	89.7
35-44	286	274	237	37	13.5	95.8
45-64	359	290	220	70	24.1	80.8
65 +	194	50	47	3	6.0	25.8
Nonwhite Female	2845	1008	962	46	4.6	55.9
0-15	1041	--	--	--	--	--
16-17	110	37	32	5	13.5	33.6
18-19	110	70	66	4	5.7	63.6
20-24	212	122	119	3	2.5	57.5
25-34	420	314	305	9	2.9	74.8
35-44	323	177	170	7	4.0	54.8
45-64	355	213	198	15	7.0	60.0
65 +	274	75	72	3	4.0	27.4

ADDITIONAL UNEMPLOYMENT PROJECTIONS

FISCAL YEAR 1979

Worcester LMA

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number of Different Individuals Unemployed During Year
TOTAL	12,152	6.1	3,062	39,403
White Male	8,467	7.4	2,875	25,401
White Female	3,381	4.1	75	13,057
Nonwhite Male	258	20.5	112	774
Nonwhite Female	46	4.6	0	171

ADDITIONAL PLANNING DATA PROJECTIONS

FISCAL YEAR 1979

Worcester LMA

	Employed Part-Time for Economic Reasons
TOTAL	7,069
White Male	3,083
White Female	3,861
Nonwhite Male	53
Nonwhite Female	72

	Economically Disadvantaged 18 Years and Over
TOTAL	21,702
White	20,393
Black	784
Other	301
Spanish	224

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS
FISCAL YEAR 1979

Worcester Consortium

	Population	Labor Force	Employ	Unemploy	Unemploy Rate	Labor Force Participation Rate
TOTAL	306023	158868	149624	9244	5.8	70.1
White Male	145717	91124	84683	6441	7.1	86.1
0-15	39942	--	--	--	--	--
16-17	6127	4524	3699	825	18.2	73.8
18-19	6127	4685	3725	960	20.5	76.5
20-24	13779	11750	10855	895	7.6	85.3
25-34	19020	18081	16973	1108	6.1	95.1
35-44	13858	13131	12460	671	5.1	94.8
45-64	32296	31807	30179	1628	5.1	98.5
65 +	14568	7146	6792	354	5.0	49.1
White Female	155129	66085	63512	2573	3.9	56.3
0-15	37669	--	--	--	--	--
16-17	5587	4800	4538	262	5.5	85.9
18-19	5588	4315	4137	178	4.1	77.2
20-24	13462	10483	10205	278	2.7	77.9
25-34	18864	10727	10439	288	2.7	56.9
35-44	14964	9967	9633	334	3.4	66.6
45-64	36209	23578	22582	996	4.2	65.1
65 +	22786	2215	1978	237	10.7	9.7
Nonwhite Male	2574	905	709	196	21.7	55.2
0-15	934	--	--	--	--	--
16-17	96	51	25	26	51.0	53.1
18-19	97	19	13	6	31.6	19.6
20-24	268	149	116	33	22.1	55.6
25-34	408	265	217	48	18.1	65.0
35-44	263	201	173	28	13.9	76.4
45-64	327	172	119	53	30.8	52.6
65 +	181	48	46	2	4.2	26.5
Nonwhite Female	2603	754	720	34	4.5	45.7
0-15	953	--	--	--	--	--
16-17	103	22	18	4	18.2	21.4
18-19	103	52	49	3	5.8	50.5
20-24	193	103	101	2	1.9	53.4
25-34	389	255	248	7	2.7	65.6
35-44	291	110	105	5	4.5	37.8
45-64	318	144	133	11	7.6	45.3
65 +	253	68	66	2	2.9	26.9

ADDITIONAL UNEMPLOYMENT PROJECTIONS

FISCAL YEAR 1979

Worcester Consortium

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number of Different Individuals Unemployed During Year
TOTAL	9,244	5.8	2,304	30,129
White Male	6,441	7.1	2,159	19,323
White Female	2,573	3.9	58	10,092
Nonwhite Male	196	21.7	87	588
Nonwhite Female	34	4.5	0	126

ADDITIONAL PLANNING DATA PROJECTIONS

FISCAL YEAR 1979

Worcester Consortium

	Employed Part-Time for Economic Reasons
TOTAL	5,660
White Male	2,456
White Female	3,112
Nonwhite Male	38
Nonwhite Female	54

	Economically Disadvantaged 18 Years and Over
TOTAL	20,529
White	19,502
Black	615
Other	236
Spanish	176

July 3, 1978

Worcester LMA First Calender Quarter 1978

Ranking of Active Applicants, Insured Unemployed, Job Openings, and Jobs Filled By Occupation

Occupational Category	Rank as Percentage of Job Applicants in Active File	Rank as Percentage of Insured Unemployed	Rank as Percentage of Job Vacancies Listed	Rank as Percentage of Total Job Vacancies Filled	Rank as Percentage of Job Vacancies Listed in Occupation Filled
Professional, Technical, Managerial	4	3	4	4	7
Clerical & Sales	1	1	2	3	6
Services	3	6	3	2	8
Farming, Fishing, Forestry	9	9	9	9	1
Processing	8	8	8	8	3
Machine Trades	5	4	5	7	9
Bench Work	7	7	6	5	5
Structural Work	6	2	7	6	4
Miscellaneous	2	5	1	1	2

prepared by D. R. Sullivan

DRS:dl

[illegible]

ASS. MA20.27: Wo 1980

U OF [illegible] LIBRARY

ANNUAL PLANNING INFORMATION REPORT FISCAL YEAR 1980 WORCESTER LMA

[illegible]
COLLECTION
JUN [illegible]
University of Massachusetts
Depository Copy

LABOR AREA RESEARCH PUBLICATION

Job Market Research Service ● Massachusetts Division of Employment Security

ANNUAL PLANNING INFORMATION REPORT

FISCAL YEAR 1980

WORCESTER, MASSACHUSETTS
LABOR MARKET AREA
AND
CETA PRIME SPONSOR CONSORTIUM

Prepared by: Bruce E. Searleman
Senior Labor Market Economist
Labor Area Research Department
Massachusetts Division of
Employment Security
Charles F. Hurley Building
Government Center
Boston, Massachusetts 02114

Table of Contents

Page

I. Highlights and Conclusions........................ 1

II. Description of Area
   a. Definition of Area.............................. 3
   b. Population and Labor Force Trends............... 3

III. Unemployment Trends and Characteristics............. 4

IV. Employment Service Unfilled Job Openings............ 7

V. Employment Developments and Outlook By Industry.. 10

VI. Employment Developments and Outlook By Occupation...................................... 10

VII. Estimates of Need for Manpower Services............. 13

Map

Map of Worcester Labor Market Area and Consortium......... 2

List of Tables

Estimated Unemployment Rates By Sector and Industry Worcester LMA, March 1979 and March 1978.................. 4

Unemployment Rates Estimated By Age and Sex Worcester LMA, March 1979 and March 1978.................. 5

Nonagricultural Wage and Salary Worcester LMA, 1976-1978.................................. 8

Job Orders Received and Filled Compiled From ESARS Worcester Job Bank, October 1, 1977 Through February 28, 1978............................. 10

Job Orders Received and Filled Compiled From ESARS Worcester Job Bank, October 1, 1978 Through February 28, 1979............................. 11

Table of Contents (continued)

Page

List of Tables (continued)

ES Job Bank Openings by Job Bank Area, By Occupational Category, By Average Pay, March 1979..... 12

Job Applicants Available and Job Placement Made Worcester Job Bank, October 1, 1977-February 28, 1978 and October 1, 1978-February 28, 1979 13

Appendix Tables
(Fiscal Year 1980 Projections)

Labor Market Area - Population and Labor Force........... 16

Labor Market Area - Unemployment........................ 17

Labor Market Area - Other Data.......................... 18

CETA Consortium Area - Population and Labor Force........ 19

CETA Consortium Area - Other Data....................... 20

Characteristics of Employment Service Applicants Worcester County, October 1, 1978 Through April 30, 1979... 21

Selected Characteristics of the Insured Unemployed, Worcester Labor Area, December 1978..................... 22

Selected Characteristics of the Insured Unemployed, Worcester CETA, December, 1978......................... 25

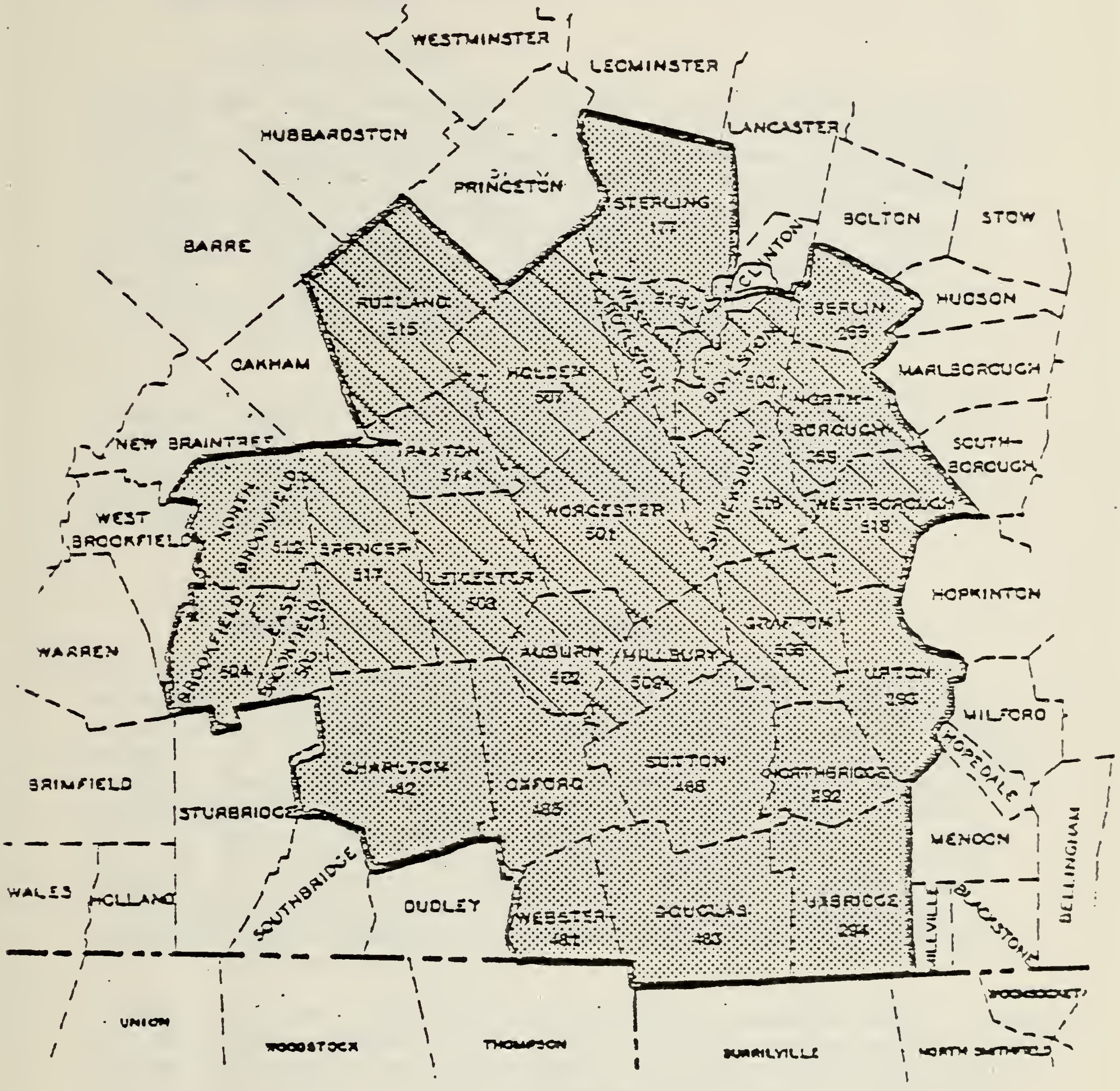
I. Highlights and Conclusions

The economy of the Worcester Labor Market Area remains as strong as it was at this time last year. A number of large development and revitalization projects are in various stages of completion throughout the region and others of at least equal size and importance have been announced. Labor markets continue to tighten in virtually every industry, leading to shortages of personnel, particularly in skilled professional and technical trades.

There is as yet no definitive sign of an economic downturn in the Worcester area, although increased unemployment among older women and young males bears watching. Unfortunately, members of these groups often require employment training or other job-related aid but fail to qualify for it under overly rigid program requirements. On the other hand, the local economy is providing jobs for almost all of the available labor force, and there is every expectation that it will remain at close to full employment for the foreseeable future.

WORCESTER LABOR AREA

and CONSORTIUM



THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

Consortium

▨

area

March 1975

II. Description of Area

a. Definition of Area

The Worcester Labor Market Area is located entirely within Worcester County in central Massachusetts. It contains only one city, Worcester, the second largest in the Commonwealth of Massachusetts, and twenty-six towns. They are Auburn, Berlin, Boylston, Brookfield, Charlton, Douglas, East Brookfield, Grafton, Holden, Leicester, Millbury, Northboro, Northbridge, North Brookfield, Oxford, Paxton, Rutland, Shrewsbury, Spencer, Sterling, Sutton, Upton, Uxbridge, Webster, Westboro, and West Boylston. The population of the Labor Market Area at the time of the 1975 state census was 385,583, up 1.9 percent from the 378,289 at the time of the 1970 federal census.

The Worcester area is also the location of a CETA Prime Sponsor Consortium. Communities included are Worcester, Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Northboro, Paxton, Rutland, Shrewsbury, Spencer, Westboro, and West Boylston. The population of this consortium in 1975 was 306,620, roughly, (80 percent) that of the Labor Market Area.

b. Population and Labor Force Trends

Population projections by age and sex for the Worcester LMA and the Worcester CETA Consortium have been based on survival rates for the local area (see Appendix Tables). These forecasts for the 1980 fiscal year are not intended to be definitive, although they do point up demographic changes affecting the area. The most important of these is the population bulge among those 25 through 34 caused by the post-World War II baby boom. The data also reflect declining birth rates during the last two decades, as well as burgeoning numbers of those over 65 (especially among females). Through 1985, population growth in the area should average less than two percent per year, barring major population shifts induced by relocation of large industrial facilities to or from Central Massachusetts.

Growth in the area's labor force should progress somewhat faster. During the last decade, changes in life-styles and child-rearing practices have induced more young women to participate in the labor force than in previous eras. Spurred on by the increasingly high cost of living, this trend should continue, though at a progressively slower rate as the number of women in affected age groups continues to decline. Nevertheless, labor force growth over the next five years whould be double that for the population as a whole.

III. Unemployment Trends and Characteristics

A sampling of claims records at DES offices throughout the Worcester LMA reveals a potential trouble spot in the local economy. The data collected in the March 1979 field was used to estimate unemployment rates by industry in the local area, and the results so derived have been tabulated and compared with those for a survey taken in March 1978:

Estimated Unemployment Rates
By Sector and Industry
Worcester LMA
March 1979 and March 1978

Sector or Industry	Unemployment Rate March 1979	 March 1978
Overall	5.2	5.2
Manufacturing	5.1	4.3
Durable Goods	3.0	4.3
Nondurable Goods	8.6	4.2
Nonmanufacturing	5.3	5.5
Construction	43.6	52.3
Trade	3.1	3.6
Services	2.6	2.5
Government	3.0	1.5
Other Nonmanufacturing	5.8	5.1

Of course unemployment in the construction industry remains woefully high, but this is a problem which is national in scope and does not reflect any weakness in the Worcester area economy per se. What needs to be closely watched is the increase in the unemployment rate of the area's nondurable goods manufacturing subsector. However, this increase may reflect only a statistical rather than a real economic trend and care must be taken in ascribing to it more significance than it deserves.

This is true for several reasons. First, the increase may have arisen soley through sampling error in the latest field survey (or indeed in the previous one). Secondly, claims record data may not accurately reflect real distributional patterns of unemployment among area industries. Finally, a sizeable increase in the number of female benefit check recipients in the 45-64 age brackett is responsible for much of the increase, perhaps reflecting nothing more than a random spate of early retirements among women in this age group.

Using the best available estimates of Worcester LMA employment by age and sex, data from claims surveys may also be used to estimate unemployment rates for these demographic categories as well:

Unemployment Rates
Estimated By Age and Sex
Worcester LMA
March 1979 and March 1978

Age Group	Male		Female		Total	
	March 1979	March 1978	March 1979	March 1978	March 1979	March 1978
Overall	6.2	6.2	3.8	3.4	5.2	5.1
16-24	5.9	2.9	1.4	1.6	3.8	2.3
25-34	5.3	7.5	4.1	4.5	4.8	6.4
35-44	6.7	7.0	3.4	3.6	5.4	5.6
45-64	7.0	7.5	5.0	4.0	6.1	6.0
65+	5.0	5.6	10.1	6.9	6.4	6.0

Unemployment rates went down in all categories except older women and males in the youngest age group. Sampling error may have contributed substantially to the latter result, since many young men in this age group are still completing their educations and work part-time and/or seasonally. Increased unemployment among older women is potentially more significant, perhaps indicating the first signs of weakness in the local economy. However, overall unemployment rates remain about what they were a year ago and increased unemployment rates among particular groups may only indicate statistical anomalies, or in the case of older women, an increased prospensity toward early retirement. There is as yet no reason to believe this rise in unemployment among older women is anything but temporary and insignificant,or to believe that unemployment rates in other age groups will rise in the face of increasingly tight labor market now present throughout the Worcester LMA.

IV. Employment Service Unfilled Job Openings

By far the largest shortage among occupations in short supply as reported by the Worcester DES Employment Service Office is for skilled machinists. Employers in fact have almost stopped requesting experienced applicants in this and related occupations due to the lack of response. Other skilled trade positions, auto body mechanics, in particular, are also going begging as labor markets continue to tighten throughout the region. DES Employment Service personnel also note employer interest in hiring key punch operators, who are in short supply because of rapid promotion of people who hold these positions into higher level computer-related occupations. Many firms are also actively seeking greater numbers of qualified clerk typists; this occupation is also in surplus supply because employers find most applicants to be unqualified to perform available jobs adequately. Finally, the largest shortage among professional occupations is for nurse aides, demonstrating the continuing shortage of skilled medical personnel in general throughout the area.

V. Employment Developments and Outlook by Industry

The Worcester LMA continued its post-recessionary expansion without break through 1978 and finished the year with the highest nonagricultural wage and salary employment total (162,200) on record. Some seasonal declines in the nonmanufacturing sector decreased nonagricultural employment to below 160,000, but this should in no way be taken to be a sign of diminished vitality in the local economy. Indeed, the area shows absolutely no sign of the downturn that national economists have been predicting for months, and there is every expectation that the effects of any such recession in the near future on the Worcester area would be minimal in magnitude and short-lived in duration.

Continuing the trend in recent years, most of the growth in nonagricultural employment took place in the nonmanufacturing sector, particularly government, services and wholesale and retail trade as the table on the following page indicates:

Nonagricultural Wage and Salary
Worcester LMA
1976-1978*

	1978	1977	1976
NONAGRICULTURAL TOTAL	157.0	151.6	147.2
Manufacturing	46.6	45.0	43.7
Durable Goods	29.5	28.1	27.5
Primary Metals	2.4	2.5	2.6
Fabricated Metals	9.0	8.6	8.7
Nonelectrical Machinery	8.4	8.0	7.8
Other Durable Goods	9.7	9.0	8.4
Nondurable Goods	17.1	16.9	16.2
Textiles	4.4	4.4	4.2
Leather Goods	2.1	2.2	2.2
Other Nondurable Goods	10.6	10.3	9.8
Nonmanufacturing	110.4	106.6	103.5
Contract Construction	4.0	4.0	3.8
Transportation-Communications-Utilities	6.9	6.9	6.9
Wholesale and Retail Trade	33.9	33.2	31.7
Finance-Insurance-Real Estate	8.4	8.2	8.0
Services	29.6	28.4	27.8
Government	27.6	25.9	25.3

* All figures in thousands of workers.

Industrial developments in the Worcester Labor Market Area during 1978 were almost uniformly positive, with many firms announcing plans for major plant expansions on both new and existing work sites. Several companies were granted industrial revenue bond issues under the auspices of the Worcester Industrial Development Financing Authority to finance new construction. Among these were Micro Networks Corporation, which plans to build a 23,000 square-foot computer components addition to its Clark Street facility, Norton Company which plans to construct a 16,000 square-foot diamond grinding wheel operations plant, and the Valle Steak House chain which announced plans to build a 14,000 square-foot, 400-seat restaurant on Summer Street (all in Worcester). Other large-scale construction projects announced during the year included a $2 million, 30,000 square-foot plant addition at the Holbrook Drop Forge Division of Providence Steel and Iron on Rockdale Street in Worcester, a 400-seat family restaurant to be built by the Campbell Soup Company on Route 12 in Auburn, and a new 150,000 square-foot Raytheon Electronics plant in Northboro. Even more ambitious than these projects, the Westboro Planning Board released plans for a 115-acre industrial subdivision near Routes 9 and 495 and has already received a number of inquiries from firms in high-quality industries about locating on the site. Meanwhile,the Worcester City Council has approved Market Place Associates as the sole developer for a $15 million to $25 million revitalization of the former Denholm-McKay block in the city's downtown area.

The number and size of these development projects thus clearly demonstrates the industrial vitality of this region. Given the equally impressive public and quasi-public development projects now under way, such as the Civic Center, Medical School and revitalization of Worcester's Piedmont area, the future of the Worcester Labor Market Area 's economy appears to be bright indeed. What constraints there are at present are on the supply side of production, primarily involving an increasing scarcity of skilled technical and professional personnel, to which we now turn.

VI. Employment Developments and Outlook by Occupation

The number of job openings received and filled at DES job placement offices in the Worcester Labor Market Area decreased markedly during 1978, yet another indication of tight labor markets in Central Massachusetts. Tabulations of job records for the first five months of fiscal years 1979 and 1980 by major occupational category are given in the table below and on the following page.

Job Orders Received and Filled
Compiled From ESARS
Worcester Job Bank
October 1, 1977 Through February 28, 1978

DOT	Major Occupational Category	Openings Received Number	Openings Received Percent	Openings Filled Number	Openings Filled Percent
	TOTAL	4,908	100.0	3,243	100.0
0-1	Professional, Technical and Managerial	629	12.8	359	11.1
2	Clerical and Sales	905	18.4	522	16.1
3	Service	868	17.7	567	17.5
4	Farming, Fishing and Forestry	44	0.9	63	1.9
5	Processing	183	3.7	139	4.3
6	Machine Trades	470	9.6	249	7.7
7	Bench Work	396	8.1	278	8.6
8	Structural Work	379	7.7	271	8.3
9	Miscellaneous	1,034	21.1	795	24.5

Job Orders Received and Filled
Compiled From ESARS
Worcester Job Bank
October 1, 1978 Through February 28, 1979

DOT	Major Occupational Category	Openings Received		Openings Filled	
		Number	Percent	Number	Percent
	TOTAL	2,696	100.0	1,344	100.0
0-1	Professional, Technical and Managerial	253	9.4	56	4.2
2	Clerical and Sales	569	21.1	253	18.8
3	Service	434	16.1	232	17.3
4	Farming, Fishing and Forestry	72	2.7	10	0.7
5	Processing	103	3.8	44	3.3
6	Machine Trades	317	11.7	143	10.6
7	Bench Work	159	5.9	81	6.0
8	Structural Work	164	6.1	95	7.1
9	Miscellaneous	625	23.2	430	32.0

Table E.S. Job Bank Job Openings By Job Bank Area
By Occupational Category By Average Pay
March 1979

	Massachusetts	Boston-Metro	Lawrence	Springfield	Taunton	Worcester
Occupational Category		Average Pay				
Total All Openings	$ 8,245.00/yr	$ 8,828.00/yr	$8,152.00/yr	$8,169.00/yr	$7,194.00/yr	$7,994.00/yr
Professional, Technical, And Managerial	10,294.00/yr	12,032.00/yr	9,394.00/yr	9,863.00/yr	9,614.00/yr	9,704.00/yr
Clerical And Sales	7,537.00/yr	7,767.00/yr	7,594.00/yr	7,386.00/yr	7,331.00/yr	7,402.00/yr
Service	3.62/hr	3.66/hr	3.57/hr	3.65/hr	3.68/hr	3.44/hr
Farming, Fishery, Forestry, And Related	3.77/hr	4.30/hr	3.91/hr	3.44/hr	3.82/hr	3.78/hr
Processing	3.79/hr	3.86/hr	3.74/hr	4.27/hr	3.50/hr	3.58/hr
Machine Trades	4.09/hr	4.45/hr	3.90/hr	4.07/hr	3.92/hr	4.05/hr
Bench Work	3.42/hr	3.73/hr	3.36/hr	3.27/hr	3.22/hr	3.35/hr
Structural Work	4.32/hr	4.61/hr	4.36/hr	4.17/hr	4.05/hr	4.46/hr
Miscellaneous	3.60/hr	3.80/hr	3.53/hr	3.57/hr	3.46/hr	3.54/hr

Source: Employment And Training Administration
U.S. Department Of Labor

Large decreases in openings received and filled occurred for virtually every occupational category. The only significant relative changes among those were the increase in the percentage of miscellaneous openings filled and an almost equivalent decrease in the percentage of professional, technical and managerial openings filled. This is to be expected because high levels of employment in the area have stabilized the work forces of area firms, leading to low rates of turnover among skilled occupations, as well as an avoidance of DES placement offices by workers between jobs who are actively seeking reemployment but no longer require job service aid.

VII. Estimate of Need for Manpower Services

The only significant changes in the demographic and economic characteristics of job applicants available and those actually placed in new jobs at DES offices throughout the Worcester LMA were marked relative decreases in economically disadvantaged individuals represented in regional totals of both categories, as indicated in the following table:

Job Applicants Available and Job Placements Made
Worcester Job Bank
October 1, 1977-February 28, 1978
and
October 1, 1978-February 28, 1979

Characteristics of Unemployed	Job Applicants Available (in Percent)		Job Placements (in Percent)	
	1977-1978	1978-1979	1977-1978	1978-1979
Under Age 20	12.0	12.7	17.4	20.3
Over Age 44	17.9	16.9	13.5	13.1
Male	56.1	62.7	64.8	65.9
High School Dropout	37.8	31.2	37.5	36.1
Nonwhite	5.9	12.3	10.9	16.3
Spanish American	5.7	6.8	8.0	9.0
Veteran	16.7	16.0	20.3	15.3
Vietnam Era	2.0	5.0	3.4	5.3
Handicapped	5.4	4.4	5.0	3.1
Economically Disadvantaged	35.7	15.9	35.6	13.7

The decreases most probably indicate that better economic conditions have combined with improved training programs for the economically disadvantaged to increase their employability significantly. Given the lack of marked imbalances of job placements and worker availability among demographic and economic groups listed in the table for both fiscal years in question, it must be concluded that the overall strength of the Worcester area's economy is benefiting workers of all types, regardless of their experience or levels of skill. Manpower service activities, to be effective under these conditions, must become much more active in seeking out individuals in need of job-related aid. Doing this successfully will require a de-emphasis of current reliance upon the demographic and economic characteristics of individuals and greater provision of training and other job-related services based on need. A prime example of individuals requiring aid are unemployed spouses of working people who do not qualify for services as being economically disadvantaged or members of designated demographic and/or economic groups eligible for job training under current programs. These programs ought to be available to anyone who expresses an interest in them and is willing to make an effort to retrain themselves successfully. Hopefully, necessary changes in selection criteria will be made in the near future.

APPENDIX

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS
FISCAL YEAR 1980

Worcester LMA

	Population	Labor Force	Employ.	Unemploy.	Unemploy. Rate	LFP* Rate
TOTAL	387,511	201,718	190,225	11,493	5.7	70.4
White Male	185,382	116,216	108,209	8,007	6.9	86.4
0-15	50,919	--	--	--	--	--
16-17	7,769	5,782	4,757	1,025	17.7	74.4
18-19	7,678	6,188	4,995	1,193	19.3	80.6
20-24	17,844	15,093	13,980	1,113	7.4	84.6
25-34	24,899	23,441	22,064	1,377	5.9	94.1
35-44	18,001	17,787	16,953	834	4.7	98.8
45-64	40,768	39,817	37,793	2,024	5.1	97.7
65 +	17,504	8,108	7,667	441	5.4	46.3
White Female	196,522	83,209	80,013	3,196	3.8	56.1
0-15	48,152	--	--	--	--	--
16-17	7,177	6,077	5,751	326	5.4	84.7
18-19	7,091	5,598	5,378	220	3.9	78.9
20-24	17,346	12,714	12,369	345	2.7	73.3
25-34	25,091	14,095	13,738	357	2.5	56.2
35-44	19,018	12,685	12,270	415	3.3	66.7
45-64	45,485	29,310	28,072	1,238	4.2	64.4
65 +	27,162	2,730	2,435	295	10.8	10.1
Nonwhite Male	2,775	1,272	1,027	245	19.3	71.4
0-15	994	--	--	--	--	--
16-17	105	68	36	32	47.1	64.8
18-19	104	22	14	8	36.4	21.1
20-24	288	164	123	41	25.0	56.9
25-34	456	396	336	60	15.2	86.8
35-44	285	277	242	35	12.6	97.2
45-64	357	294	228	66	22.3	82.4
65 +	186	51	48	3	5.9	27.4
Nonwhite Female	2,832	1,021	976	45	4.4	56.3
0-15	1,018	--	--	--	--	--
16-17	110	37	32	5	13.5	33.6
18-19	108	71	67	4	5.6	65.7
20-24	218	124	121	3	2.4	56.9
25-34	440	318	309	9	2.8	72.3
35-44	322	179	172	7	3.9	55.6
45-64	353	216	202	14	6.5	61.2
65 +	263	76	73	3	3.9	28.9

* Labor Force Participation

ADDITIONAL UNEMPLOYMENT PROJECTIONS

FISCAL YEAR 1980

Worcester LMA

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number Of Different Individuals Unemployed During Year
TOTAL	11,493	5.7	2,896	37,267
White Male	8,007	6.9	2,719	24,024
White Female	3,196	3.8	71	12,349
Nonwhite Male	245	19.3	106	732
Nonwhite Female	45	4.4	0	162

ADDITIONAL UNEMPLOYMENT PROJECTIONS

FISCAL YEAR 1980

Worcester Consortium

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number Of Different Individuals Unemployed During Year
TOTAL	8,743	5.4	2,179	28,496
White Male	6,091	6.6	2,042	18,276
White Female	2,432	3.7	55	9,545
Nonwhite Male	186	18.3	82	556
Nonwhite Female	34	4.2	0	119

Additional Planning Data Projections
Fiscal Year 1980

Worcester LMA

	Employed Part-time For Economic Reasons
TOTAL	6,686
White Male	2,916
White Female	3,652
Nonwhite Male	50
Nonwhite Female	68

	Economically Disadvantaged 18 Years and Over
TOTAL	20,525
White	19,287
Black	741
Other	285
Spanish	212

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS
FISCAL YEAR 1980

Worcester Consortium

	Population	Labor Force	Employ.	Unemploy.	Unemploy. Rate	LFP* Rate
TOTAL	306,865	160,871	152,128	8,743	5.4	70.7
White Male	148,031	92,683	86,592	6,091	6.6	85.8
0-15	40,012	--	--	--	--	--
16-17	6,105	4,611	3,831	780	16.9	75.5
18-19	6,033	4,935	4,027	908	18.4	81.8
20-24	14,022	12,037	11,190	847	7.0	85.8
25-34	21,923	18,694	17,647	1,047	5.6	85.3
35-44	14,145	13,985	13,351	634	4.5	98.9
45-64	32,036	31,954	30,414	1,540	4.8	99.7
65 +	13,755	6,467	6,132	335	5.2	47.0
White Female	154,428	66,359	63,927	2,432	3.7	56.9
0-15	37,838	--	--	--	--	--
16-17	5,640	4,846	4,598	248	5.1	85.9
18-19	5,572	4,464	4,297	167	3.7	80.1
20-24	13,631	10,139	9,876	263	2.6	74.4
25-34	19,717	11,241	10,969	272	2.4	57.0
35-44	14,944	10,116	9,800	316	3.1	67.7
45-64	35,742	23,375	22,433	942	4.0	65.4
65 +	21,344	2,178	1,954	224	10.3	10.2
Nonwhite Male	2,181	1,015	829	186	18.3	72.5
0-15	781	--	--	--	--	--
16-17	83	54	30	24	44.4	65.1
18-19	82	18	12	6	33.3	22.0
20-24	226	131	100	31	23.7	58.0
25-34	358	316	270	46	14.6	88.3
35-44	224	220	193	27	12.3	98.2
45-64	281	235	185	50	22.2	83.6
65 +	146	41	39	2	4.9	28.1
Nonwhite Female	2,225	814	780	34	4.2	57.1
0-15	800	--	--	--	--	--
16-17	86	29	25	4	13.8	33.7
18-19	85	57	54	3	5.3	67.1
20-24	171	99	97	2	2.0	57.9
25-34	346	254	247	7	2.8	73.4
35-44	253	143	138	5	3.5	56.5
45-64	277	172	161	11	6.4	62.1
65 +	207	60	58	2	3.3	29.0

* Labor Force Participation

Additional Planning Data Projections
Fiscal Year 1980
Worcester Consortium

	Employed Part-time For Economic Reasons
TOTAL	5,353
White Male	2,323
White Female	2,943
Nonwhite Male	36
Nonwhite Female	51

	Economically Disadvantaged 18 Years and Over
TOTAL	19,416
White	18,445
Black	582
Other	223
Spanish	166

04/30/79 MASSACHUSETTS CNTY 027 Worcester County

CHARACTERISTICS OF THE ACTIVE FILE

ITEM NO	CHARACTERISTICS OF APPLICANTS	TOTAL	FEMALE	ECONOMICALLY DISADVANTAGED	HANDICAPPED	MINORITY GROUP			WELFARE	VETERAN			ELIG CLAIMANT	SEASONAL FARMWORKER	AGE	
						TOTAL	BLACK NOT HISPANIC	HISPANIC		TOTAL	VIETNAM ERA	SPECIAL VET			UNDER 22	45 O OLDE
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
93010	AGE	12292	6675	5862	764	1146	421	663	5039	1588	526	174	4964	0	2493	186
93015	15 AND UNDER	13	9	7	0	1	0	1	7	0	0	0	1	0	13	
93017	16-17	412	183	223	7	37	16	21	177	1	0	0	31	0	412	
93018	18-19	1044	448	274	19	82	20	59	166	20	1	0	267	0	1044	
93020	20-21	1024	405	227	29	96	43	40	126	74	11	1	450	0	1024	
93025	22-24	1506	533	474	60	143	54	79	346	193	81	7	804	0	0	
93030	25-29	2145	1029	1015	116	221	85	120	867	312	187	47	965	0	0	
93035	30-34	1940	1266	1285	122	210	74	126	1108	281	167	76	655	0	0	
93037	35-39	1375	974	960	106	131	48	79	917	146	35	14	453	0	0	
93040	40-44	967	651	662	80	107	33	70	612	132	14	9	325	0	0	
93045	45-54	1214	777	611	155	97	39	47	547	261	24	16	574	0	0	121
93050	55-64	546	294	119	62	21	8	13	83	154	6	4	375	0	0	54
93055	65 AND OVER	104	36	5	8	0	0	0	3	14	0	0	64	0	0	10
93060	SEX	12292	-	5862	764	1146	421	663	5039	1588	526	174	4964	0	[illegible]	[illegible]
93065	MALE	56,17	0	1726	452	541	184	323	1204	1487	511	173	2884	0	[illegible]	[illegible]
93070	FEMALE	6675	-	4136	312	605	237	340	3835	101	15	1	2080	0	1045	[illegible]
93075	HIGHEST SCHOOL GRADE	12292	6675	5862	764	1146	421	663	5039	1588	526	174	4964	0	[illegible]	[illegible]
93080	0-7	590	316	398	53	209	17	181	337	49	6	3	193	0	37	20
93085	8-11	4236	2323	2640	308	494	180	294	2317	382	88	23	1320	0	1146	68
93090	12	4833	2312	2201	278	315	145	157	1902	738	280	87	2121	0	[illegible]	[illegible]
93095	OVER 12	2633	1224	623	125	128	79	31	463	419	152	61	1340	0	429	32
93100	RESIDENCE	12292	6675	5862	764	1146	421	663	5039	1588	526	174	4964	0	2493	186
93105	URBAN	10586	5908	5367	648	1093	402	636	4680	1308	440	144	3967	0	[illegible]	[illegible]
93110	RURAL	1706	767	495	116	53	19	27	359	280	86	30	997	0	395	26
93115	RACE/ETHNIC	12292	6675	5862	764	1146	421	663	5039	1588	526	174	4964	0	2493	186
93120	WHITE (NOT HISPANIC)	11135	6065	5129	717	0	0	0	4457	1495	483	159	4642	0	2275	174
93125	BLACK (NOT HISPANIC)	421	237	248	20	421	-	0	189	62	30	10	147	0	79	4
93130	HISPANIC	663	340	444	25	663	0	-	365	22	10	4	161	0	129	6
93135	AMERICAN INDIAN & ALASKAN NATIVE	13	9	8	1	13	0	0	7	4	2	0	2	0	1	
93140	ASIAN & PACIFIC ISL.	49	19	29	1	49	0	0	17	4	1	1	10	0	7	
93145	INA	11	5	4	0	0	0	0	4	1	0	0	2	0	[illegible]	
93150	ELIGIBLE CLAIMANT	4964	2080	1019	258	320	147	161	712	737	209	73	-	0	749	[illegible]
93155	[illegible]	4784	2018	963	244	303	138	153	668	652	186	66	4784	0	[illegible]	[illegible]
93160	VETERAN	1588	101	530	257	92	62	22	332	-	526	174	737	0	[illegible]	[illegible]
93165	RECENTLY SEPARATED	457	37	146	47	36	20	13	85	457	243	50	214	0	[illegible]	
93170	VIETNAM ERA	239	10	79	33	24	16	6	47	239	-	46	101	0	[illegible]	
93175	SPECIAL VETERAN	174	1	34	43	15	10	4	19	174	174	-	76	0	1	[illegible]
93180	DISABLED	116	5	22	116	4	2	2	10	116	53	26	52	0	5	[illegible]
93185	HANDICAPPED	764	312	427	-	47	20	25	340	257	88	43	258	0	[illegible]	[illegible]
93190	ECONOMICALLY DISADVANTAGED	5862	-	5862	427	729	248	444	5030	530	136	34	1019	0	731	73
93195	FOOD STAMP WORK REG.	41	21	30	1	4	2	2	25	7	3	1	3	0	10	
93200	WELFARE	5039	3835	5030	340	576	139	365	-	332	87	19	712	0	476	63

COUNTY 027

MONTHLY YEAR TO DATE
FOR PERIOD ENDING 04/30/79

SELECTED CHARACTERISTICS OF INSURED UNEMPLOYED
WORCESTER LABOR AREA

DECEMBER 1978

	ALL PROGRAMS		PRO-GRAMS	PSE
	NUMBER	PERCENT	NUMBER	NUMBER
TOTAL	2740	100.0	2279	461
AGE				
UNDER 20	-	-	-	-
UNDER 25	503	18.4	390	113
25 - 34	733	26.8	562	171
35 - 44	359	13.1	296	63
45 - 54	434	15.8	368	66
55 - 64	382	13.9	340	41
65 & OVER	319	11.6	312	7
I.N.A.	11	.4	11	-
SEX				
MEN	1590	58.0	1293	297
WOMEN	1150	42.0	986	164
I.N.A.	-	-	-	-
ETHNIC GROUP				
WHITE	2684	98.0	2240	444
NON-WHITE	56	2.0	39	17
I.N.A.	-	-	-	-
SPANISH SURNAME	31	1.1	17	14
OCCUPATION				
PROF.,TECH.,MGT	621	22.7	514	106
CLERICAL/SALES	654	23.9	536	118
SERVICES	300	10.9	260	40
FARM,FISH,FOR.	31	1.1	16	15
PROCESSING	40	1.5	40	-
MACHINE TRADES	194	7.1	172	22
BENCH WORK	242	8.8	229	13
STRUCTURAL	344	12.6	250	94
MISC. WORK	314	11.5	261	53
I.N.A.	-	-	-	-
RECENT DURATION				
0-9 WEEKS	1154	42.1	1024	130
10-19 WEEKS	1182	43.1	892	290
20-29 WEEKS	405	14.8	363	42
30 + WEEKS	-	-	-	-

CONTINUED -1

	ALL PROGRAMS NUMBER	 PERCENT	PRO- GRAMS NUMBER	PSE NUMBER
INDUSTRY ATTACH.				
MANUFACTURING	766	28.0	766	-
CON. CONSTRUCT	191	7.0	187	3
TRAN./UTIL.	104	3.8	104	-
WHOL/RET.TRADE	528	19.3	528	-
FIN/INS/R.E.	78	2.8	78	-
SERVICES	464	16.9	455	9
GOVERNMENTS	580	21.2	131	449
OTHERS	16	.6	16	-
I.N.A.	14	.5	14	-
AVE. WEEKLY WAGE				
UNDER $100	388	14.2	375	13
$100 - $149	725	26.5	497	229
$150 - $199	619	22.6	423	196
$200 - $249	424	15.5	411	13
$250 - $299	242	8.8	232	10
$300 OR MORE	322	11.8	322	-
I.N.A.	20	.7	20	-
SEPARATION REASON				
LAYOFF	2066	75.4	1617	448
QUIT VOL. RET.	8	.3	8	-
QUIT PREGNANCY	3	.1	3	-
QUIT OTHER	159	5.8	159	-
DISCHARGES	205	7.5	195	10
LABOR DISPUTE	-	-	-	-
OTHER/INA	300	10.9	297	3

SELECTED CHARACTERISTICS OF INSURED UNEMPLOYED
WORCESTER CETA

DECEMBER 1978

	ALL PROGRAMS		PROGRAMS	PSE
	NUMBER	PERCENT	NUMBER	NUMBER
TOTAL	2136	100.0	1808	329
AGE				
UNDER 20	-	-	-	-
UNDER 25	382	17.9	302	80
25 - 34	580	27.2	448	131
35 - 44	255	11.9	220	35
45 - 54	355	16.6	299	55
55 - 64	271	12.7	250	21
65 & OVER	283	13.2	276	7
I.N.A.	11	.5	11	-
SEX				
MEN	1246	58.3	1032	215
WOMEN	890	41.7	776	114
I.N.A.	-	-	-	-
ETHNIC GROUP				
WHITE	2080	97.4	1769	311
NON-WHITE	56	2.6	39	17
I.N.A.	-	-	-	-
SPANISH SURNAME	31	1.5	17	14
OCCUPATION				
PROF.,TECH.,MGT	541	25.3	468	73
CLERICAL/SALES	496	23.2	420	76
SERVICES	226	10.6	191	35
FARM,FISH,FOR.	10	.5	3	7
PROCESSING	31	1.5	31	-
MACHINE TRADES	135	6.3	121	14
BENCH WORK	192	9.0	181	10
STRUCTURAL	252	11.8	183	69
MISC. WORK	253	11.8	208	45
I.N.A.	-	-	-	-
RECENT DURATION				
0-9 WEEKS	838	39.2	755	83
10-19 WEEKS	987	46.2	752	235
20-29 WEEKS	311	14.6	301	10
30 + WEEKS	-	-	-	-

CONTINUED -1

	ALL PROGRAMS		PROGRAMS	PSE
	NUMBER	PERCENT	NUMBER	NUMBER
INDUSTRY ATTACH.				
MANUFACTURING	550	25.7	550	-
CON. CONSTRUCT	163	7.6	160	3
TRAN./UTIL.	75	3.5	75	-
WHOL/RET.TRADE	454	21.3	454	-
FIN/INS/R.E.	69	3.2	69	-
SERVICES	380	17.8	376	3
GOVERNMENTS	421	19.7	100	322
OTHERS	10	.5	10	-
I.N.A.	14	.7	14	-
AVE. WEEKLY WAGE				
UNDER $100	329	15.4	319	10
$100 - $149	547	25.6	370	176
$150 - $199	438	20.5	316	121
$200 - $249	338	15.8	328	10
$250 - $299	205	9.6	194	10
$300 OR MORE	266	12.5	266	-
I.N.A.	14	.7	14	-
SEPARATION REASON				
LAYOFF	1553	72.7	1235	318
QUIT VOL. RET.	8	.4	8	-
QUIT PREGNANCY	3	.1	3	-
QUIT OTHER	142	6.6	142	-
DISCHARGES	177	8.3	171	7
LABOR DISPUTE	-	-	-	-
OTHER/INA	253	11.8	250	3

AGE AND AVERAGE WEEKLY EARNINGS OF THE INSURED UNEMPLOYED
WORCESTER CETA

DECEMBER 1978

	TOTAL		MALES		FEMALES	
	NUMBER	PER.	NUMBER	PER.	NUMBER	PER.
TOTAL	2136	100.0	1246	100.0	890	100.0
AGE GROUPS						
TOTAL	2125	99.5	1243	99.8	882	99.1
UNDER 20	-	-	-	-	-	-
UNDER 25	382	17.9	228	18.3	154	17.3
25 - 34	580	27.2	333	26.7	246	27.6
35 - 44	255	11.9	159	12.8	96	10.8
45 - 54	355	16.6	204	16.4	151	17.0
55 - 64	271	12.7	128	10.3	143	16.1
65 & OVER	283	13.2	192	15.4	91	10.2
WEEKLY EARN.						
TOTAL	2122	99.3	1236	99.2	886	99.6
UNDER $100	329	15.4	87	7.0	243	27.3
$100-$149	547	25.6	218	17.5	329	37.0
$150-$199	438	20.5	271	21.7	166	18.7
$200-$249	338	15.8	236	18.9	102	11.5
$250-$299	205	9.6	177	14.2	28	3.1
$300 +	266	12.5	247	19.8	19	2.1

DURATION MOST RECENT SPELL (ALL PROGRAMS)
WORCESTER CETA

DECEMBER 1978

	TOTAL	0-4 WEEKS	5-14 WEEKS	15-26 WEEKS	27+ WEEKS
TOTAL	2136	374	1043	677	42
OCCUPATION					
PROF,TECH,MGT	541	91	251	182	17
CLERICAL/SALES	496	66	247	181	3
SERVICES	226	45	111	69	-
FARM,FISH,FURS	10	3	3	3	-
PROCESSING	31	7	7	10	7
MACHINE TRADES	135	17	76	38	3
BENCH WORK	192	42	102	45	3
STRUCTURAL	252	56	135	58	3
MISC. WORK	253	48	111	91	3
I.N.A.	-	-	-	-	-
INDUSTRY ATTACH.					
MANUFACTURING	550	104	270	162	14
CONSTRUCTION	163	39	94	30	-
TRANS/UTIL	75	26	14	28	7
WHOL/RET/TRADE	454	66	206	167	14
FIN/INS/R.E.	69	3	35	31	-
SERVICES	380	51	189	136	3
GOVERNMENTS	421	81	219	118	3
OTHERS	10	3	3	3	-
I.N.A.	14	-	14	-	-
MALES	1243	222	613	383	24
UNDER 20	-	-	-	-	-
UNDER 25	228	31	138	55	3
25 - 34	333	73	170	90	-
35 - 44	159	17	87	52	3
45 - 54	204	55	80	62	7
55 - 64	128	7	66	51	3
65 & OVER	192	39	73	73	7
FEMALES	882	148	423	294	17
UNDER 20	-	-	-	-	-
UNDER 25	154	21	92	42	-
25 - 34	246	64	106	63	14
35 - 44	96	7	28	58	3
45 - 54	151	28	78	45	-
55 - 64	143	19	69	55	-
65 & OVER	91	10	50	31	-

MASS. MA20.27: Wo/981

ANNUAL PLANNING INFORMATION REPORT
FISCAL YEAR 1981
WORCESTER LMA

LABOR AREA RESEARCH PUBLICATION

Massachusetts Division of Employment Security

job market research

ANNUAL PLANNING INFORMATION REPORT

FISCAL YEAR 1981

WORCESTER, MASSACHUSETTS
LABOR MARKET AREA

Prepared by: Bruce E. Searleman
Senior Labor Market Economist
Labor Area Research Department
Massachusetts Division of
Employment Security
Charles F. Hurley Building
Government Center
Boston, Massachusetts 02114

TABLE OF CONTENTS

Page

I. Area Description 1
  A. Definition of Areas 1
  B. Commuting and Transportation Patterns and Needs 1

IIA. Assumptions & Projections for Economy 5

IIB. Economic Assumptions 8

III. Population and Labor Force Characteristics 12

IV. Training Program 19

V. Employment Developments and Outlook 25

VI. Recent Unemployment Trends and Projections 29

VII. Individuals In Need of Employment Services 31

VIII. Employment and Outlook by Occupation 32

IX. Labor Supply-Demand Imbalances 34

X. Summary and Conclusions 37

TABLES

Page

1. Population and Labor Force Composition Projections Fiscal Year 1981--Worcester LMA.................................. 13

2. Additional Planning Data Projections Fiscal Year 1981--Worcester LMA.................................. 14

3. Additional Unemployment Projections Fiscal Year 1981--Worcester...................................... 15

4. Additional Unemployment Projections Fiscal Year 1981--Worcester Consortium.......................... 15

5. Population and Labor Force Composition Projections Fiscal Year 1981--Worcester Consortium.......................... 16

6. Additional Planning Data Projections Fiscal Year 1981--Worcester Consortium.......................... 17

7. Recent Graduates and Current Employment of Four Vocational Technical High Schools.. 20

8. Courses Given by Career Education Training Center (Worcester CETA) Fiscal Years 1979 and 1980..................... 21

9. Enrollment and Placements in Completed Skills Training Programs CETA Marlboro--Fiscal Year 1979........................ 22

10. Recent Graduates and Current Enrollment by Course Worcester Industrial Technical Institute--1979.................. 23

11. Recent Graduates and New Enrollment in Health and Business Vocational Programs--Quinsigamond Community College (1979)...... 24

12. Employment by Sector and Industry Worcester Labor Market Area--March 1980 and March 1979.......... 25

13. Unemployment Rates Estimated by Sector and Industry--Worcester LMA................. 29

14. Unemployment Rates Estimated by Age and Sex--Worcester LMA......................... 30

15. Job Applicants Available and Job Placement Rates--Worcester Job Bank October 1, 1978, - March 31, 1979 and October 1, 1979 - March 31, 1980.. 31

TABLES (CONTINUED)

16. Unemployment Compensation Recipients Percent of Total Employment Service 203 Samples Worcester LMA DES Offices -- March 1979 and March 1980.............32

17. Job Orders Received and Filled -- Compiled From ESARS Worcester Job Bank -- October 1, 1978 Through March 31, 1979.......34

18. Job Orders Received and Filled -- Compiled From ESARS Worcester Job Bank -- October 1, 1979 Through March 31, 1980.......35

FIGURES

1. Major Roadways Serving the Worcester Labor Market.................. 2

I. Area Description

A. Definition of Areas

The Worcester Labor Market Area is defined so as to include the set of all contiguous municipalities around Worcester whose residents commute from home to work primarily within the area rather than to other labor market areas, as determined by surveys of regional commuting patterns. At present the Worcester Labor Market Area consists of the city of Worcester and the towns of Auburn, Berlin, Boylston, Brookfield, Charlton, Douglas, East Brookfield, Grafton, Holden, Leicester, Millbury, Northborough, Northbridge, North Brookfield, Oxford, Paxton, Rutland, Shrewsbury, Spencer, Sterling, Sutton, Upton,Uxbridge, Webster, Westborough, and West Boylston.

The Worcester Consortium is the set of municipalities legally sanctioned to administer all programs of the Comprehensive Employment and Training Act (CETA) under the jurisdiction of the Worcester Prime Sponsor. The Worcester Consortium consists of the city of Worcester and the towns of Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Northborough, Paxton, Rutland, Shrewsbury, Spencer, Westborough, and West Boylston.

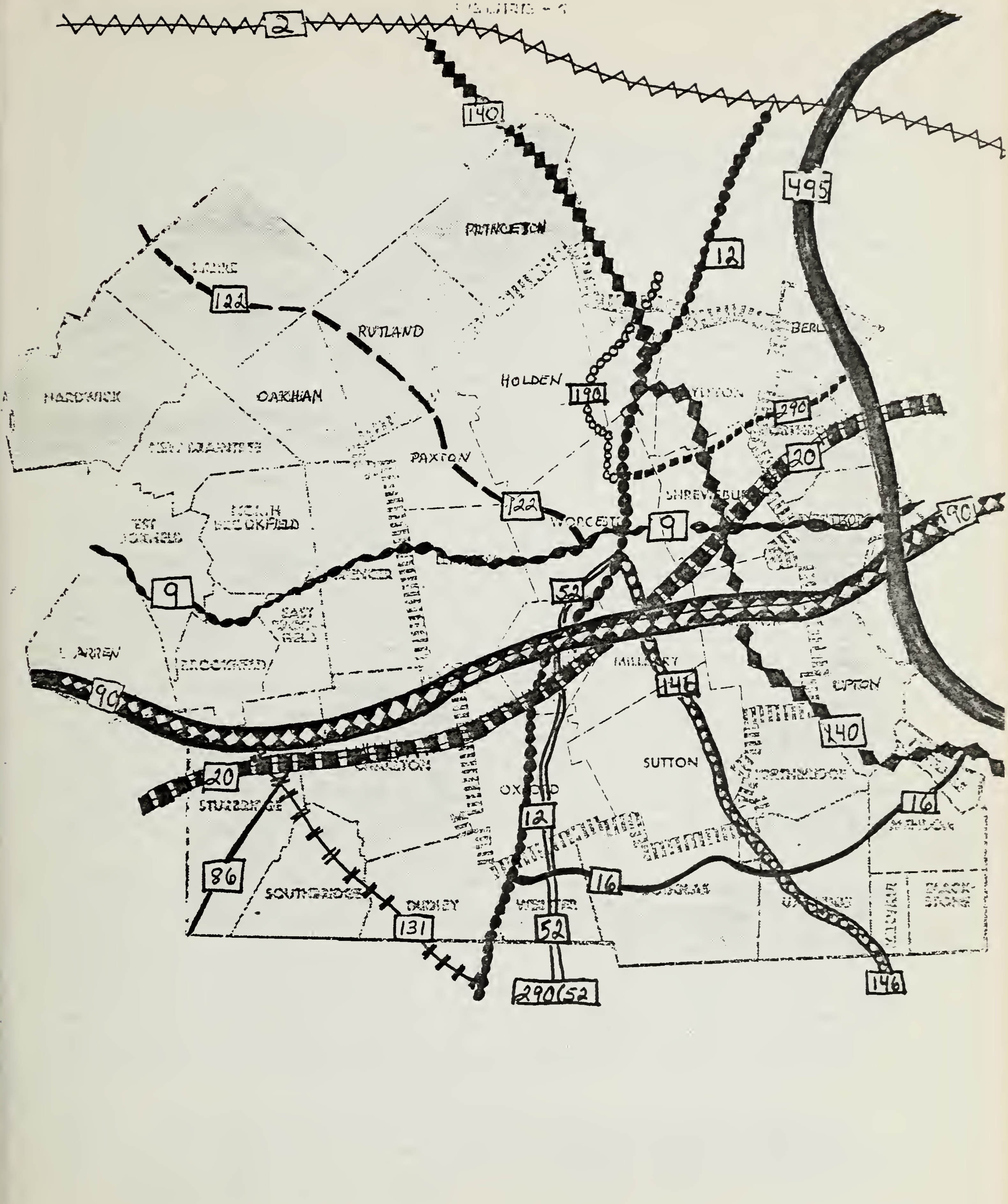
B. Commuting and Transportation Patterns and Needs

Studies conducted by the Central Massachusetts Regional Planning Commission demonstrate, as might be expected, that the city of Worcester serves as the primary source of jobs for LMA residents who do not work in their own communities. Also, as might be expected, the attraction of Worcester to commuters (except as noted below) drops off more or less proportionately with the distance of their residence from the central city, although many of the city's workers in fact commute from outside the labor market area itself (this applies most particularly to those who reside in the Fitchburg-Leominster LMA and, to a lesser extent, to those who live in several towns of northwestern Connecticut). Commuting from outlying areas to Worcester and the inner ring of towns surrounding it occurs mainly along several primary roadways, some new and efficient and others seriously in need of major upgrading and/or supplementation. A schematic representation of these highways is given in Figure 1.

With the completion of Route 52 from Auburn to Webster and its connection with Route 290 East leading to Worcester and points north, commuting difficulties to the south of Worcester have been virtually eliminated. More or less the same can be said about vehicular access to the city to and from the east and northeast due to the existence and heavy use of Routes 20, 9, 90 and the east-northeastern leg of Route 290, all connecting with Route 495.

Access to the city from other directions tends to be considerably more difficult. In the north, Route 140 through Princeton does not carry enough traffic, while Route 12 through West Boylston cannot adequately bear the traffic flow required of it. This problem is being addressed by a major upgrading of Route 140 between Shrewsbury and Boylston and by construction of Route 190 to Route 2 in the Fitchburg-Leominster LMA.

FIGURE - 1


2
140
495
PRINCETON
12
BARRE
122
RUTLAND
BERLIN
HOLDEN
190
HARDWICK
OAKHAM
290
20
PAXTON
NEW BRAINTREE
SHREWSBURY
NORTH BROOKFIELD
122
WEST BROOKFIELD
WORCESTER
9
90
LEICESTER
SPENCER
52
9
EAST BROOKFIELD
WARREN
MILLBURY
BROOKFIELD
146
UPTON
90
140
SUTTON
20
CHARLTON
OXFORD
STURBRIDGE
NORTHBRIDGE
16
12
86
16
SOUTHBRIDGE
DUDLEY
WEBSTER
DOUGLAS
UXBRIDGE
MILLVILLE
BLACKSTONE
131
52
290/52
146

To the southeast Route 146 to the Blackstone Valley along the Rhode Island state line needs upgrading, and neither it nor Route 122 to the northwest through Barre are major limited access roads that can be used easily and without delay. The roads connecting the southwest with Worcester include Routes 90, 20 and 86 from Connecticut, but access to Worcester is hindered by the lack of a direct route to the city as well as by bottlenecks encountered upon leaving Route 290 in Worcester itself.

The worst access problems are along Route 9 both within Worcester where major bottlenecks occur at Webster, Gardner and Lincoln Squares and to the west through Spencer and the Brookfields where the road becomes little more than a winding two lane highway along much of its length. Route 9 West already carries heavy traffic flow between Spencer and Worcester at peak commuting hours and current projections of use predict it will soon be over capacity. Unfortunately, either widening it or supplementing it with a new facility could create significant environmental problems and lead to strenuous objections over the need to acquire additional land by eminent domain to complete such projects.

To a large extent road systems within the Central Region are designed to enhance access to Worcester from outlying regions or to permit easy transit through Central Massachusetts to and from other population centers within the state. Travel elsewhere throughout the region can be quite time consuming, especially south of the city. A trip between Sturbridge and Webster along Route 131 requires going into Connecticut and doubling back north along Route 12. Proceeding on to Hopedale along Route 16 may be a pleasant ride, but not one designed to enhance commuting speed. Such conditions make it difficult to promote industrial growth among firms who require readily available pools of labor and easy transport of raw materials and finished products. A proposed improvement of Route 131 or alternatively construction of a new Route 49 between Sturbridge and Southbridge cannot be justified because of low current traffic flow between the towns but should be seriously considered to promote economic development in the area. Improved access to Worcester, however, is sufficient reason to build a new interchange at the junction of Routes 90 and 146 in Millbury.

Vanpooling and ride sharing programs are not as necessary in the Worcester area as in the Boston SMSA because commuting times tend to average only 15 minutes rather than an hour or more and it is therefore more inconvenient to pick up other commuters if you have to go out of your way (this does not necessarily apply to commuting from outlying regions). Bus transportation within Worcester, as well as road systems within the city, are more than adequate at present, but service between the city and nearby towns is minimal and between the towns themselves all but nonexistent. New interest in some towns to join the Worcester Regional Transit Authority appear more to be attempts to promote elderly and handicapped travel rather than to improve commuting.

Finally, rail and air transportation systems are also more than adequate at present. Worcester has long prided itself as being the center of rail transport in both Massachusetts and New England, a tradition that has recently been enhanced by the efforts of the Providence and Worcester Railway in picking up old lines that have stopped operating.

Inter-regional air systems are also sufficient for the area's needs, though some experts believe that the Worcester Airport should also become a relief facility for Logan Airport in Boston.

In conclusion, except for bottlenecks along Route 9 in and to the west of Worcester, traffic flow even at peak commuting hours is at present sufficiently fluid in the city and to and from the towns contiguous to it. Problems arise primarily with respect to roadways to and from some outlying areas, although inter-regional travel to other population centers within the state by road, rail and air appear to present no problems at present or in the foreseeable future. The combination of the location of the Labor Market area in the geographical center of the state and the availability of public and private carriers create a good commuting environment in a gasoline conscious society when compared to other Metropolitan Areas in the nation.

IIA Assumptions and Projections for the Economy
Commonwealth of Massachusetts
Federal Fiscal Year 1981 (FFY '81)

The Job Market Research staff of the Division of Employment Security has the responsibility for analyzing and reporting changes in the State's employment and unemployment. Nevertheless, even with the most current data and with computer models of the national and state economies, projecting economic conditions is extremely difficult in these times of rapid changes. (At the national level, for example, projections of the FFY '81 average unemployment rate have been increased by almost two percentage points in a recent two-month period). The economic assumptions for Massachusetts were based on data available at the beginning of June 1980.

1. Employment

Employment by industry groups has been projected for the coming fiscal year. Detailed projections are analyzed in a later section of this report. Total employment in Massachusetts is expected to range around 2,705,000 for FFY '81. This is an expected decline of 5,000 from FFY '80. Wage and salary employment projections by industry group for FFY '81 range around the levels shown below:

Industry	Employment Projected FFY 1981 in 000's
TOTAL NONAGRICULTURAL EMPLOYMENT	2,655.4
Manufacturing - Total	669.4
Durable goods	406.1
Nondurable goods	263.3
Construction	78.0
Transportation, Communications & Public Utilities	119.1
Wholesale and Retail Trade	589.2
Finance, Insurance and Real Estate	151.8
Services 1/	626.1
Government - Total	421.6
Federal	60.8
State	98.1
Local	262.8

1/ Includes part of Agriculture and Mining

2. Unemployment Rate

We expect Massachusetts to average approximately one-half to one percentage point below the national average rate. As of this writing, the Data Resources Incorporated (DRI) national forecast is for an 8.5 percent average unemployment rate during FFY '81. This would give Massachusetts an average unemployment rate of about 8 percent over the same time period.

3. Labor Turnover

The labor turnover in Massachusetts is expected to follow the 1971 trend during which new hires and quits fell 30 percent to levels below 2.0 per 100 employees. Total accessions are expected to be fewer than total separations by a ratio of 2 to 3.

4. Wages and Inflation

Total wages are expected to increase by approximately 11 percent. Purchasing power is not expected to rise by as much as wages because inflation will continue to reduce the value of the dollar. During FFY '80 inflation has risen to 13.5 percent, but is expected to be less in FFY '81 -- perhaps down to 10 percent. It is doubtful that consumers will continue purchasing at the FFY '80 rate, which is already considerably lower than FFY '79 in real terms.

5. Credit

The cost of financing current purchases is expected to remain high, but well below the FFY '80 peak which saw a prime rate of 20 percent. The mortgage rates are projected to be around 11.0-11.5 percent in FFY '80, and consumer credit in a range of 11-12 percent. All interest rates are highly sensitive to changes in U. S. Treasury or Federal Reserve Bank policies.

6. Defense Contracts

Defense contract spending, vital to the health of the Massachusetts economy, is expected to remain stable at its current levels. Massachusetts is among the top 10 states in the receipt of defense contracts with a value greater than $10,000. The nearly $3 billion awarded to the Commonwealth's firms represents over 5 percent of the total awards.

7. Energy

Because the Massachusetts industrial mix is relatively nonenergy intensive, we do not expect the upward trend in energy prices to affect Massachusetts as much as the rest of the country. During 1979, industries coped with rising energy costs through conservation, conversion, and cogeneration.

IIB Economic Assumptions

There is little doubt that the long expected national recession will soon be upon us. Economists disagree about the severity of this downturn, but there is general agreement among local analysts that the Worcester LMA is less vulnerable to recessionary pressures of every magnitude than it was during 1975, when the last major downturn engulfed it. Unemployment rates during this mid-decade recession remained in double-digits for fifteen consecutive months, averaging 11.2 percent for the 1975 calendar year. However a major restructuring of the local economy took place in the intervening years and this should prevent unemployment rates in the coming recession from rising much above 7.0 percent for any month during the next fiscal year. The overall length of this downturn should be considerably shorter as well.

During the last downturn the Worcester area economy was still dominated by a number of "mature" and declining industries which proved highly vulnerable to recessionary pressures. Many have since closed or moved and been replaced by a number of firms engaged in high-technology enterprises. These firms have absorbed virtually all skilled labor in the region, creating severe labor shortages that are not expected to be short-lived. Even if their product demand should decline substantially in the coming months, which is not likely to happen, they will still find it necessary to "stockpile" skilled labor for fear of not having it available when economic conditions improve. Hence, the area's core manufacturing industries are not expected to engage in layoffs of any significant size in the foreseeable future. Some temporary job losses will no doubt take place in traditionally cyclically vulnerable industries such as softwares and trade. Also, construction employment has been and will continue to be severely impacted by high interest rates and lack of investment capital due to strict anti-inflationary policies and the credit crunch they have created. But employment levels should remain fairly stable in the region as a whole, however. Particular problems are likely to rise only in those local areas, such as in the southern tier of towns along the Connecticut line, which still have primarily traditional economic structures of relatively old mature industries.

Most national projections of cost-of-living increases estimate that consumer price rises will average about nine to ten percent during the fiscal year, about half the rate of rise during the first quarter of 1980. Continued high levels of consumer spending throughout 1979 buoyed the national economy and delayed the onset of recession far beyond the variously predicted dates of national economic experts. Consumer purchasing began to decline significantly with the passing of the 1979 Christmas sales season, when savings accounts began to be depleted, credit card debt limits approached and bank loans became much harder to acquire due to restrictive monetary policies of the Federal Reserve Board. Thus at present the resolution and ability of consumers in general to maintain their standards-of-living in the face of rising prices is very much reduced, and consumer spending nationally and locally should remain well below last year's levels until general economic conditions and individuals' finances improve substantially.

High interest rates usually cause a severe drop in capital spending in many industries. Their effect on the Worcester Area will be far less marked than they have been in the past and than they will be in other parts of the state and nation, again due to the relatively recent influx of high-technology enterprises into the region. Product demand is sufficiently strong for these firms that they can ignore recessionary effects elsewhere in the economy and use funds generated internally to finance new capital equipment rather than rely on bank loans. In fact, a number of new construction projects are already underway or have been announced by area firms. On the other hand some smaller and more traditional firms have been severely affected by the credit crunch at present, and some may be forced out of business if sufficient operating capital is not available (interest rates are expected to decrease soon, however). On the whole, though, capital spending in the Worcester Area should remain well above what one would ordinarily expect, even given a continued severe credit crunch and depressed national economic conditions.

Most of the acknowledgment for the present strength of the Worcester LMA's economy has been laid at the door of high-technology. Its importance on the local scene requires a closer look at how it affects production, employment and growth in the labor market area, for at first blush few local manufacturing firms would appear to be in what are commonly taken to be high-technology industries. In particular, only about 7 percent of current manufacturing employment in the LMA would be classifiable as being in the high technology sector, using a previously published DES* definition which includes all instrument and electrical machinery products, along with drugs, ordnance and accessories, office, computing and accounting machines, guided missiles and space vehicles, and miscellaneous transportation equipment. The area does have several firms, including Micro Network, Incoterm, Astra Pharmaceuticals, Sprague Electric, Valtec and the David Clark Company that make products which would conform to any definition of being high-technology items. But together they and their smaller counterparts comprise but a small fraction of total area employment and sales in the manufacturing sector and we must look further to understand how this sector uses high-technology to bolster the LMA's overall economic vitality.

The basic difficulty arises because manufacturing in the Worcester LMA has been and continues to be much more diversified than in the Technology Crescent bounded by Routes 128 and 495 where the state's quite highly visible electronics and related industries sprouted and grew so rapidly in recent years. Such skyrocketing growth made it easy to miss the more broadly based manufacturing developments in the Worcester area, particularly in its durable goods subsector. Firms therein may be less glamorous than those in electronics, scientific instruments and other so-called high-technology industries, but many have the same commitment to research and development of new products requiring highly advanced technology that is the primary characteristic of such firms in these industries. Examples include Wyman Gordon (titanium forgings used in aircraft engines), Warner & Swasey (numerically controlled machine tools), Jamesbury (ball valves used in refineries) and the Norton Company (organic bonded grinding wheels).

Such firms do have one other important characteristic in common with many high technology enterprises. Some of their products and production processes are so advanced that they may not be available anywhere else, or at least not available at competitive prices. Thus it is significant that the Reed Rolled Thread and Die Company in Holden produces the machinery responsible for threading ninety-five percent of the spark plugs used in the United States. Other area hardgoods firms dominate their markets in similar ways, and have been responsible for a great deal of new physical plant construction and employee hiring in the Worcester LMA in the last five years, after the local economy recovered from the mid-decade recession.

At present most area firms are marking time, however, waiting to see how the recession will affect sales before embarking on new expansion programs. With this in mind we can take a closer look at probable developments in the various segments of the Worcester economy for fiscal 1981.

Durable Goods

Employment should be at least stable and could increase slightly in several of the industries comprising this subsector in the area. Production demand for stone-clay-glass, nonelectrical machinery, electronic equipment and instruments is not expected to be much affected by the recession and they will need to avoid layoffs to make sure skilled labor is available after the downturn even if product demand does decline. In addition, some firms produce items so sophisticated that they dominate the markets they serve, while others are sufficiently large and sure enough of stable long term demand to continue production at pre-recession rates. Some problems are likely in primary and fabricated metals, transportation equipment, lumber and furniture because they depend more directly on sales to final consumers, and these are likely to diminish markedly during the recession. On the whole, however, the durable goods subsector of the Worcester LMA is now one of the strongest and most recession resistant in Massachusetts and will perform accordingly during fiscal 1981.

Nondurable Goods

This subsector is more vulnerable to recessionary pressures than its hardgoods counterpart. Textiles, apparel, paper products, leather goods and miscellaneous manufacturing can expect to see some decreases in product demand which may be sufficiently large and last long enough to require some modest layoffs, but to the extent that their sales are regional rather than national they will benefit by a better than average performance by the state's economy during the upcoming downturn. Rubber and plastics and chemicals have been growth industries in recent years and will be mildly affected by the recession, nor will the area's food industry which can depend on more stable product demand than other softgoods industries. Overall then, some modest decreases in payrolls can be expected in nondurable goods, but these will be far less than in the 1975-1976 recession.

Nonmanufacturing

The wholesale and retail trade and service industries dominate employment in this sector, which is usually fairly vulnerable to recessionary forces. Even though the inflation rate is expected to decline to roughly ten percent during fiscal 1981, cutbacks in hours worked and modest layoffs in the manufacturing sector will induce some payroll declines in these industries as well, but again these will be far less than in the mid-decade recession. Contract construction employment will get a boost from declining home mortgage interest rates, but this will be at least partly offset by reduced contracts from industry which will postpone capital investment projects until the recession is over. This industry continues to be beset by high materials and labor costs and was hard hit by the high and rising interest rates which occurred during the first half of fiscal 1980. On the other hand, government, transportation-communication-public utilities and finance-insurance-real estate constitute an important part of the local economy's infrastructure and their payrolls are expected to maintain their usual stability in the months ahead.

In sum, the Worcester Labor Market Area will perform much better in the upcoming recession than it did in the one which began five years ago, but it will not escape completely unscathed. It can, however, look forward to a buoyant economic future when the storm clouds of recession have passed because of the dynamic nature its core hardgoods manufacturing industries have exhibited in recent years.

---

* See Massachusetts Division of Employment Security Labor Area Research Publication "Annual Planning Information Report, Fiscal Year 1980, Commonwealth of Massachusetts," page 29.

III. Population and Labor Force Characteristics

The following demographic and labor market data for the Worcester Labor Market Area and the Worcester CETA Consortium are based on the best available information. Because they were derived for the most part by extrapolating past trends, this data is not intended to be definitive. It can, however, be useful for purposes of labor market and other economic planning within the areas in question.

Table 1 POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS FISCAL YEAR 1981

Worcester LMA

	Population	Labor Force	Employ.	Un-Employ.	Unemploy. Rate	LFP* Rate
TOTAL	381,363	206,683	194,075	12,608	6.1	69.4
White Male	180,575	112,947	106,425	6,522	5.8	81.6
0-15	42,078	-	-	-	-	-
16-17	7,991	6,337	5,502	835	13.2	79.3
18-19	8,141	6,063	5,092	971	16.0	74.5
20-24	18,254	15,146	14,239	907	6.0	83.0
25-34	22,036	21,595	20,473	1,122	5.2	98.0
35-44	19,900	19,502	18,823	679	3.5	98.0
45-64	41,432	36,248	34,599	1,649	4.5	87.5
65+	20,743	8,056	7,697	359	4.5	38.8
White Female	195,036	91,174	85,406	5,768	6.3	58.8
0-15	39,885	-	-	-	-	-
16-17	7,453	7,314	6,725	589	8.1	98.1
18-19	7,593	5,996	5,598	398	6.6	79.0
20-24	16,591	13,166	12,543	623	4.7	79.4
25-34	23,369	16,396	15,752	644	3.9	70.2
35-44	21,338	16,023	15,275	748	4.7	75.1
45-64	46,062	29,131	26,897	2,234	7.7	63.2
65+	32,744	3,148	2,616	532	16.9	9.6
Nonwhite Male	2,829	1,323	1,097	226	17.1	67.3
0-15	862	-	-	-	-	-
16-17	173	129	100	29	22.5	74.6
18-19	176	35	27	8	22.9	19.9
20-24	343	174	137	37	21.3	50.7
25-34	376	319	264	55	17.2	84.8
35-44	280	250	217	33	13.2	89.3
45-64	453	360	299	61	16.9	79.5
65+	166	56	53	3	5.4	33.7
Nonwhite Female	2,923	1,239	1,147	92	7.4	61.2
0-15	899	-	-	-	-	-
16-17	165	71	61	10	14.1	43.0
18-19	167	124	117	7	5.6	74.3
20-24	353	259	252	7	2.7	73.4
25-34	283	228	211	17	7.5	80.6
35-44	355	217	202	15	6.9	61.1
45-64	429	266	237	29	10.9	62.0
65+	272	74	67	7	9.5	27.2

*Labor Force Participation

Table 2 Additional Planning Data Projections
Fiscal Year 1981
Worcester LMA

	Employed Part-time For Economic Reasons
TOTAL	6,899
White Male	2,868
White Female	3,898
Nonwhite Male	53
Nonwhite Female	80

	Economically Disadvantaged 18 Years and Over
TOTAL	20,230
White	18,969
Black	760
Other	292
Spanish	209

Table 3 ADDITIONAL UNEMPLOYMENT PROJECTIONS
FISCAL YEAR 1981
WORCESTER LMA

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number of Different Individuals Unemployed During Year
TOTAL	12,608	6.1	2,441	42,861
White Male	6,522	5.8	2,215	19,568
White Female	5,768	6.3	128	22,287
Nonwhite Male	226	17.1	98	675
Nonwhite Female	92	7.4	0	331

Table 4 ADDITIONAL UNEMPLOYMENT PROJECTIONS
FISCAL YEAR 1981
WORCESTER CONSORTIUM

	Unemployment	Unemployment Rate	Unemployment	Number of Different Individuals Unemployed During Year
TOTAL	9,896	6.1	1,987	33,651
White Male	5,329	6.0	1,787	15,990
White Female	4,234	5.9	96	16,617
Nonwhite Male	236	18.9	104	705
Nonwhite Female	97	8.2	0	339

Table 5 POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS

FISCAL YEAR 1981

WORCESTER CONSORTIUM

	Population	Labor Force	Employ.	Un-employ	Unemploy Rate	LFP* Rate
TOTAL	297,790	162,244	152,348	9,896	6.1	69.4
White Male	140,301	88,252	82,923	5,329	6.0	81.6
0-15	32,113	-	-	-	-	-
16-17	6,174	4,863	4,180	683	14.0	78.8
18-19	6,291	4,550	3,756	794	17.5	72.3
20-24	14,655	11,964	11,223	741	6.2	81.6
25-34	17,028	16,687	15,771	916	5.5	98.0
35-44	14,989	14,690	14,135	555	3.8	98.0
45-64	32,583	29,052	27,705	1,347	4.6	89.2
65+	16,468	6,446	6,153	293	4.5	39.1
White Female	152,132	71,558	67,324	4,234	5.9	58.8
0-15	30,396	-	-	-	-	-
16-17	5,727	5,620	5,188	432	7.7	98.1
18-19	5,835	4,630	4,339	291	6.3	79.3
20-24	13,092	10,832	10,374	458	4.2	82.7
25-34	18,034	12,385	11,911	474	3.8	68.7
35-44	16,252	12,341	11,791	550	4.5	75.9
45-64	36,404	23,172	21,533	1,639	7.1	63.7
65+	26,392	2,578	2,188	390	15.1	9.8
Nonwhite Male	2,648	1,246	1,010	236	18.9	67.4
0-15	800	-		-	-	-
16-17	157	119	89	30	25.2	75.8
18-19	160	28	20	8	28.6	17.5
20-24	318	167	128	39	23.4	52.5
25-34	364	313	255	58	18.5	86.0
35-44	262	235	201	34	14.5	89.7
45-64	429	328	264	64	19.5	76.5
65+	158	56	53	3	5.4	35.4
Nonwhite Female	2,709	1,188	1,091	97	8.2	63.2
0-15	830	-	-	-	-	-
16-17	158	68	57	11	16.2	43.0
18-19	161	114	105	9	7.9	70.8
20-24	326	256	250	6	2.3	78.5
25-34	253	218	198	20	10.1	86.2
35-44	336	210	196	14	7.1	62.5
45-64	388	250	219	31	14.2	64.4
65+	257	72	66	6	9.1	28.0

* Labor Force Participation

Table 6 Additional Planning Data Projections
Fiscal Year 1981
WorcesterConsortium

	Employed Part-time For Economic Reasons
TOTAL	5,430
White Male	2,216
White Female	3,099
Nonwhite Male	44
Nonwhite Female	71

	Economically Disadvantaged 18 Years and Over
TOTAL	19,629
White	18,412
Black	760
Other	291
Spanish	166

Population Trends

The city of Worcester is undergoing a process of gentrification as people move back to the city from the suburbs. Those who do so want to remain close to their jobs and to recreational facilities only the city provides. Higher prices for gasoline magnifies these desires. Moreover, as more of the middle class moves back, jobs are created in the nonmanufacturing sector to serve their needs. These tendencies are likely to accelerate with the completion of the civic center and Marriott Hotel as well as by smaller projects like the new Valle's Steak House.

Difficulties arise because existing housing stock is now almost completely booked and there is little new development. Worcester is only densely settled in spots and its water and sewer facilities are well under capacity, but high mortgage interest rates combined with other high building costs have prevented much development from taking place anywhere in the LMA. Rental units, if anything, are even less available, especially in the suburbs. Meanwhile, while its population declined in the first five years of the 1970's, it is now making a comeback. It does contain some blighted areas; these are relatively small in size and people generally find Worcester an attractive place to move to.

As softgoods industries moved to the sunbelt, many left their research and development divisions in and around Worcester. These and the industries they replaced have tended to change the city's character and status from being the center of a traditional New England softgoods region to being the center of a region providing high paying, high status "Entrepreneurship State" jobs. The end result is not clear, but a local population boom seems to be taking place at present as Worcester's maternity wards have once again become filled. Thus the city's population will increase even if there is little in-migration, but the process of gentrification could accelerate it tremendously in the near future and force Worcester to find ways to increase its housing facilities much faster than it has been doing. A possible way of doing this would be increased city guarantees under chapter 121A of state law which allows municipal real estate taxes to be based on the developer's rental income rather than on a fixed valuation of the newly developed property in question. In any case, closer cooperation between prospective developers and local officials would help greatly in dealing with Worcester's impending housing shortage.

IV. Training Programs

At present there are severe shortages of all types of skilled personnel, particularly machinists, computer programmers, electrical/electronic engineers/technicians, health service workers and clerical help. The major sources of new employees at area firms requiring people with these and related skills are vocational technical schools, vocational training programs taught by or under the auspices of CETA, community colleges and junior colleges. All of these organizations are tied into the business community through their boards of directors, and courses taught are determined by local business job skills requirements. At present all of the schools and CETA training programs are doing an excellent job of teaching vocational job skills, as their impressively high employment placement rates demonstrate.

They are limited not so much by budgetary constraints on personnel and training facilities as by a shortage of qualified and motivated students. With the passing of the population bulge caused by the post-World War II baby boom, fewer high school age students are available for training. Unfourtunately, liberalized teaching philosophies used extensively during the past generation resulted in high percentages of individuals who lack the verbal and mathematical skills of earlier cohorts. They also lack much of the motivation that their predecessors exhibited as well. Nevertheless, vocational schools and training programs have a good record of success in preparing qualified high school age students and CETA eligible adults for careers as skilled technical, health and clerical workers.

A complete listing of enrollees and recent graduates of major vocational training programs in the region is given in the tables which follow. For a more comprehensive analysis of vocational education in Central Massachusetts the reader is urged to send for a copy of the Massachusetts Division of Employment Security Labor Area Research Publication entitled "Vocational Education and Workforce Planning Information Report 1980 - Worcester LMA" available on request from this office.

Table 7 Recent Graduates and Current Employment Of Four Vocational Technical High Schools

	Total Graduates	Current Enrollment by Class				
		1980	1981	1982	1983	Total
TOTALS	831	891	1,006	1,069	1,155	4,121
Machine Shop	84	86	105	120	134	445
Auto Technical	65	69	84	96	103	352
Carpentry	52	63	63	79	96	301
Metal Fabrication	45	69	79	62	87	297
Graphic Arts	60	54	59	81	80	274
Electrical Wiring	57	60	60	66	69	255
Drafting	49	47	58	71	69	245
Food Trades	35	49	60	54	52	215
Electronics	38	45	46	53	46	190
Auto Body Repair	34	38	41	54	55	188
Painting and Decorating	33	37	41	51	48	177
Commercial Design	28	29	31	34	38	132
Plumbing	28	29	29	38	35	131
Data Processing	24	25	35	35	31	126
Cabinet Making	27	18	31	29	31	109
Agriculture & Landscaping	22	23	23	20	34	100
Distributive Education	20	21	17	29	32	99
Small Engine Repair	20	17	21	30	31	99
Health Services	14	22	27	18	23	90
Cosmetology	31	38	38	0	0	76
Air Condition & Refrigerator	19	17	16	19	23	75
Dietary-Homemaking	25	18	18	9	30	75
Plant Maintenance	21	17	24	21	8	70

Table 8 Courses Given by Career Education Training Center (Worcester CETA) Fiscal Years 1979 and 1980

Course Title	No. Of Weeks	Projected 1980 Enrollment	1979 Enrollment Total	Placements	Placement Rate
TOTALS	—	457	415	276	66.5
Patient Care Assistant	11	48	48	33	68.8
Ward Clerk	25	36	18	14	77.8
Secretarial	24	30	30	26	86.7
Keypunch	9	15	27	6	22.2
Bookkeeping	24	30	31	25	80.6
Secretarial/Bookkeeping	24	24	24	20	83.3
Clerk-General	16	60	62	32	51.6
Cooking-Hotel/Restaurant	16	60	59	31	52.5
English as a 2nd Language	25	50	51	36	70.6
Machinist-Tool & Die	32	44	23	14	60.9
Computer Technician	32	40	22	21	95.5
Electronic Technician	32	20	20	18	90.0

Source: Worcester CETA Consortium

Table 9 Enrollment and Placements In Completed Skills Training Programs
CETA Marlboro
Fiscal Year 1979

Course Title	Total Enrollment	Percent of Enrollments Employed	Nonpositive Terminations	Transfers And Others
TOTAL COMPLETED	371	43.1	18.3	38.6
Clerical Beginner	44	38.6	36.4	25.0
Clerical Refresher	38	50.0	15.8	34.2
Clerical Bilingual	12	16.7	25.0	58.3
Word Processing	27	14.8	18.5	66.7
Keefe Automotive	13	53.8	15.4	30.8
T V Technician	14	64.3	35.7	0.0
Electro Mechanical Drafting	15	26.7	66.7	6.6
Graphic Arts (Keefe)	12	50.0	33.3	16.7
Gen. Radio Machine (Keefe)	12	66.6	16.7	16.7
Vision in Action (Media)	25	40.0	8.0	52.0
Electronic Module Assembly	11	45.5	0.0	54.5
STIP Prime Technician	33	48.5	9.1	42.4
STIP Gen. Radio Technician	42	35.7	9.5	54.8
STIP DEC/D.G.	31	96.8	3.2	0.0
STIP DEC/Wang Technician	42	38.1	11.9	50.0

Source: Marlboro CETA Consortium

Table 10 Recent Graduates
And
Current Enrollment By Course
Worcester Industrial Technical Institute
1979

Course Title	1979 Graduates Number	1979 Graduates Percent Of Total	Current Enrollment Number	Current Enrollment Percent Of Total
TOTAL	115	100.0	372	100.0
Data Processing	20	17.4	73	19.6
Electrical Power Technology	4	3.5	15	4.0
Industrial Electronics Technology	24	20.9	68	18.3
Machine & Tool Design Technology	18	15.6	90	24.2
Electro-Mechanical Technology	10	8.7	23	6.2
Architectural Engineering and Building Construction Technology	10	8.7	38	10.2
Ophthalmic Dispensing Technology	17	14.8	33	8.9
Welding Technology	8	6.9	17	4.6
Metals Technology	4	3.5	15	4.0

Table 11 Recent Graduates and New Enrollment
In
Health and Business Vocational Programs
Quinsigamond Community College (1979)

Program Title	1979 Graduates		New Enrollees (1979)	
	Number	Percent of Total	Number	Percent of Total
TOTAL	433	100.0	726	100.0
Dental Hygiene	20	4.6	41	5.7
Nurse Education	80	18.5	139	19.2
Occupational Therapy Assistant	42	9.7	62	8.5
Radiologic Technology	25	5.8	32	4.4
Respiratory Therapy	25	5.8	37	5.1
Business Technology	75	17.3	173	23.8
Early Childhood Associate	36	8.3	61	8.4
Electronics Technology	30	6.9	64	8.8
Executive Secretarial	100	23.1	117	16.1

V. Employment Developments and Outlook

Nonagricultural wage and salary employment rose by 3,800 to 166,400 between March 1979 and March 1980 in the Worcester LMA. Following the established trend throughout the country, the lion's share of the increase (3,400 of the total) was in the nonmanufacturing sector. An overall picture of industrial employment in both sectors is given in Table 12.

Table 12 Employment by Sector and Industry

Worcester Labor Market Area
March 1980 and March 1979

Employment	March 1980	March 1979
Nonagricultural Total	166,400	162,600
Manufacturing Total	48,900	48,500
Durable Goods Total	31,200	31,400
Stone-Clay-Glass	6,700	6,700
Primary Metals	2,100	2,200
Fabricated Metals	9,600	9,900
Nonelectrical Machinery	9,300	9,300
Electrical Machinery	1,600	1,500
Other Durable Goods	1,900	1,800
Nondurable Goods Total	17,700	17,100
Food	1,400	1,500
Textiles	4,300	4,400
Paper	1,300	1,200
Printing and Publishing	2,100	2,100
Rubber and Plastics	3,600	3,200
Leather	2,200	2,000
Other Nondurable Goods	2,800	2,700
Nonmanufacturing Total	117,500	114,100
Construction	4,300	4,000
Transportation-Communication-Utilities	7,000	6,900
Trade	36,100	35,000
Finance-Insurance-Real Estate	9,000	8,700
Services	33,300	32,100
Government	27,800	27,400

Er
bu
pl
re

T
ar
co
pl
hi
wh
of
Or
to
co
us
be
Th
ta
ra
cr
ar
s

A
re
i
fa
he
a
a
l

T
f
s
t
l
w
th
s

I
th
e
y
a
th

Employment changes in the manufacturing sector were minor in most industries, but there were two exceptions, fabricated metals (-300) and rubber and plastics (+450). To get a better idea of what was happening in these industries requires a close look at developments at the subindustry level.

The significant change in fabricated metals occurred in coating, engraving and allied services (-350 over the period) in which various types of processes are employed to finish metal products to be used by other firms primarily in the production of consumer goods. Such an industry is in a highly vulnerable position if its customers fear that recessionary forces will cut into their sales. Cutting back on production will mean reduced orders to materials suppliers, such as those in the industry in question. On the other hand, increased rubber and plastics production appears to be due to rising use of miscellaneous plastics products (+500 over the period) as consumers seek ways to cut expenditures in the face of rising prices by using a less expensive raw material. The decline in fabricated metals should be temporary, with demand and employment recovering when the economy picks up. The rise in rubber and plastics employment should be part of a continuing trend, however, since prices will continue to rise at a greater or slower rate indefinitely and consumers will be pressed even harder to find ways to cut corners. Thus the significant developments in both fabricated metals and plastics goods point to the underlying strength of the LMA's industry structure.

At present, however, this strength is being severely tested by powerful recessionary pressures originating elsewhere in the country. Available evidence indicates that average hours worked by employees in the Worcester LMA's manufacturing sector have declined substantially in recent months. Increases in hourly earnings have not kept up with these declines, causing decreases in average weekly earnings among these workers. To make matters even worse, average weekly earnings over the year appear to have been far less than the 14.7 percent rise in the cost-of-living.

The most likely explanation for this state of affairs can be found in local firms' reactions to declining product demand. Since skilled workers are in such short supply, employers no doubt feel their availability must be maintained until times improve. Therefore the only viable way for them to cut labor costs in the face of declining demand is to reduce overtime hours worked. They can be expected to maintain and intensify their efforts in this direction until the eventual national economic recovery increases their sales to normal levels.

It would, however, be wrong to put too much emphasis on what is nothing but the trough phase of the business cycle. Too many firms have initiated plant expansions, store openings and new product marketing campaigns in the last year to have any doubts about the vitality of the Worcester area economy or about its long-term prospects. In fact this very vitality guarantees that the LMA will suffer far less from the effects of national recession than

many other parts of the state and nation in the months ahead.

Indeed the vitality of the local economy looks to be all the more pervasive the farther ahead we project. The Worcester LMA may not have had the explosive growth that the Marlboro area exhibited during the 1970's, but it is far more diversified and therefore better able to make productive use of technological breakthroughs in a variety of manufacturing industries. National surveys indicate that new employment mostly takes place in new firms with less than 20 workers, not, as one might expect, by accretion within large old establishments. In an era of automation when expansion within the manufacturing sector is likely to be more broadly based than in the past, the Worcester LMA is well suited to obtain its share of these gains.

For the next few years after the recession this expansion is likely to be most affected by shortages of trained technicians and other skilled workers needed to permit growth. The most likely place within the LMA for new facilities to be sited will remain Westboro, if improved road systems can induce workers to take newly created jobs there. Westboro is flat (unlike Shrewsbury and other towns to the west), can be easily zoned to separate residential and industrial areas (unlike more densely populated towns nearby) and is located on the Technology Crescent's western edge along Route 495 (high-technology firms have a marked propensity to locate close to their competitors). Land in some parts of Westboro tends to be somewhat swampy, but the major difficulty hindering expansion in this area is the labor supply. Except for the Blackstone Valley region along the Rhode Island line, the Technology Crescent has already absorbed almost all of the potential labor supply, making a linkage between 495 and 146 vital to future expansion in the eastern quadrant of the LMA.

Population densities within the LMA to the north and west of the inner ring of towns contiguous to Worcester tend to be too low to promote much industrial growth in these sectors; these communities are also rural in nature and outlook and would resist the changes brought about by such changes in any case. Worcester and the communities contiguous to it are already well developed and labor short. That leaves the LMA's southern quadrant as a possible locus of industrial growth. The labor force in this region is primarily engaged in traditional softgoods industries which offer lower wages and provide poorer working conditions and job security than can be found elsewhere in the Worcester Labor Market Area. The recent extension of Route 52 connecting with Routes 90, 20 and 290 in Auburn gives these workers much better access to jobs in Worcester and environs than they had before. Local planners believe it is only a matter of time before they start taking these better jobs in significant numbers, but also they expect to see high-technology and related firms begin to site plants in Webster and Oxford as well. Older workers will probably find it difficult to acquire the skills necessary to land good jobs in these new firms, but it appears to be only a matter of time before the southern quadrant of the area transforms its industrial base from a traditional structure to the more balanced one now characteristic of most of the urban areas in the LMA.

As in the past, most of the actual employment gains will be in the nonmanufacturing sector. This does not in any way diminish the importance of growth in manufacturing payrolls, either in terms of number of jobs or total wages earned. For even in an era of increasing automation, the manufacturing sector still occupies the central role of providing jobs and income in most local economies, and the Worcester LMA is no exception. Fortunately it can look forward to a period of further expansion and increased diversification and sophistication within its manufacturing base. Ultimately this will provide area residents not only with more jobs, but ones which are better paying and more secure as well, regardless of the occupation and industry they choose to work in.

VI. Recent Unemployment Trends and Projections

Unemployment rates by sector and industry in the Worcester LMA for March 1979 and March 1980 are given in the table below. The figures were derived using claims records survey data in conjunction with the best available nonagricultural employment estimates for each period:

Table 13 Unemployment Rates
Estimated by
Sector and Industry
Worcester LMA

Sector or Industry	Unemployment Rate March 1979	Unemployment Rate March 1980
Overall	5.3	4.8
Manufacturing	5.2	5.0
Durable Goods	3.1	4.1
Nondurable Goods	8.8	6.9
Nonmanufacturing	5.4	4.7
Construction	44.4	33.3
Trade	3.2	3.8
Services	2.6	2.8
Government	3.1	3.0
Other Manufacturing	5.9	2.6

March 1980 rates are very low by historical standards in almost every sector and industry and the labor area is in an excellent position to weather even a moderately severe national recession successfully. This is not to deny that construction employment remains woefully low, but this is at least partly due to extremely high interest rates that are expected to peak early in the second quarter. As rates drop and investment funds become more readily available construction of both homes and business facilities should pick up markedly.

As the recession begins to impinge on the LMA, soft spots are also likely to develop in nondurable manufacturing, wholesale and retail trade, and service industries. Softgoods industries in general have been in secular decline in Massachusetts since the end of World War II. Recessions hit them hard and induce plant closings and general reductions in force which are not rescinded when economic conditions improve. Trade and services employment tends to be sensitive to external economic pressures as it can be varied relatively easily by employers who need to cut costs when sales drop. Some older mature hardgoods industries, such as fabricated metals and transportation equipment could also begin laying off workers in significant numbers, but those involving high technology products and processes will be able to absorb any skilled labor released by these industries. The influence of these high-technology firms will, therefore, prevent area unemployment from rising anywhere near to the double-digit levels they reached in 1975, before high-technology industries were an important influence on local economic developments.

Claims survey data also allow estimates of area unemployment rates to be made by age and sex for March 1979 and March 1980. These estimates are reproduced in the following table:

Table 14 Unemployment Rates
Estimated by
Age and Sex
Worcester LMA

Age Group	March 1979			March 1980		
	Total	Male	Female	Total	Male	Female
Overall	5.3	6.3	3.9	4.8	5.9	3.4
16-24	3.9	6.0	1.4	3.2	5.0	1.3
25-34	4.9	5.4	4.2	7.0	9.2	4.3
35-44	5.5	6.8	3.5	4.4	5.1	3.6
45-64	6.2	7.1	5.1	4.7	5.7	3.5
65 and over	6.5	5.2	10.3	6.9	3.2	16.1

The most significant change is an increase in the unemployment rate for males in the 25-34 age bracket, combined with decreases in other age groups for males below retirement age. The changes are not due to events in any particular industry group, but represent a general pattern.

It is as yet too early to say whether or not this indicates a trend toward laying off established workers on the basis of seniority, but the possibility must be kept in mind as foreshadowing deteriorating economic conditions in the months ahead.

VII. Individuals in Need of Employment Services

Compared to the corresponding period for fiscal 1979, total applicants available for job placement at DES offices within the Worcester LMA during the first six months of fiscal 1980 decreased by 6.9 percent to 13,370. Despite this, actual placements at these offices rose by 17.2 percent to 2,512. The table below, derived from Employment Service Automated Reporting System (ESARS) data, shows, however, that some economic and demographic subgroups of applicants did not fare as well as might be expected from this improved overall placement rate:

Table 15 Job Applicants Available and Job Placement Rates

Worcester Job Bank
October 1, 1978 - March 31, 1979
and
October 1, 1979 - March 31, 1980

	Job Applicants Available (Percent)		Job Placements (Percent)	
	1978-1979	1979-1980	1978-1979	1979-1980
Under Age 20	13.3	14.8	19.3	20.9
Over Age 44	15.4	14.5	12.3	12.5
Female	45.2	50.0	40.1	47.8
High School Dropout	37.7	37.8	37.5	31.8
Nonwhite	12.5	12.8	13.0	9.7
Spanish American	7.2	7.6	7.4	5.7
Veteran	13.9	10.1	14.6	15.0
Vietnam Era	4.5	3.9	5.5	5.8
Handicapped	5.3	4.4	4.2	3.5
Economically Disadvantaged	33.4	32.6	23.3	15.4

The table shows that females were applying for Employment Service aid in greater numbers and were being rewarded with an augmented share of the increased placement totals during the first half of fiscal 1980, probably because of the severe shortage of clerical help in the local area. Improved job prospects were also evident for veterans, even though significantly fewer of them applied for aid during this period. On the other hand, economically disadvantaged individuals and high school dropouts found it harder to find work, showing both the emphasis prospective employers now place on established job skills and the need for greater participation by the unskilled in remedial education and specific job skills training programs.

VIII. Employment and Outlook by Occupation

Recent surveys of area school placement statistics, newspaper want ads, DES Employment Service Job Bank data, and other sources of information show continuing severe shortages in several occupation groups. Skilled technicians, especially machinists, health service personnel, engineers, especially electrical engineers, and clerical workers remain in very short supply throughout the Worcester LMA. Nor is the situation likely to change during the recession, for local employers will be forced to "stockpile" skilled help to insure its availability when economic conditions improve. Major efforts detailed in the aforementioned publication " Vocational Education and Workforce Planning Information Report 1980 - Worcester LMA" to remedy this state of affairs are currently being undertaken by local community organizations, but net demand for these occupational skills is so great that shortages among these trades will remain serious for some time to come.

Another way of analyzing labor market trends by occupation is by examining unemployment claims records at area DES offices. Data from Employment Service 203 surveys, monthly 4 percent samples of outstanding unemployment compensation claims made at these offices, has been used to compile the following table of relative changes in unemployment by major occupational category for March 1979 and March 1980:

Table 16 Unemployment Compensation Recipients

Percent of Total Employment Service 203 Samples
Worcester LMA DES Offices
March 1979 and March 1980

Dot Code	Major Occupational Category	March 1979			March 1980		
		Male	Female	Total	Male	Female	Total
0-9	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
0-1	Professional, Tech. and Managerial	6.1	13.0	8.4	13.4	18.3	15.0
2	Clerical and Sales	8.8	24.6	14.2	3.9	21.6	9.6
3	Services	4.1	18.2	8.9	7.9	11.7	9.1
4	Farming, Fishing and Forestry	4.1	0.0	2.7	5.5	1.7	4.3
5	Processing	2.0	9.1	4.5	3.9	5.0	4.3
6	Machine Trades	14.2	9.1	12.4	4.8	5.0	4.8
7	Bench Work	0.6	18.2	6.7	3.9	31.7	12.8
8	Structural Work	48.6	2.6	32.9	40.2	3.3	28.3
9	Miscellaneous	11.5	5.2	9.3	16.5	1.7	11.8

Sample claims over the year decreased by 14.2 percent (to 127) for males, 22.0 percent (to 60) for females, and 16.9 percent (to 187) overall.

Most construction trades are in structural occupations, hence area individuals in these occupations had the greatest relative unemployment for both of the listed months. It is difficult to say, however, whether the decline in the percentage of claimants in structural occupations over the year is due to improved economic conditions in contract construction or just a case of individuals exhausting claims after being unemployed or transfering to another occupation after the allowed 30 week compensation period. On the other hand, decreases in relative numbers of claimants in machine trades and clerical and sales occupations reinforces the conclusion that these workers are in short supply and that the involuntary periods of unemployment served by them have decreased in number and duration over the year.

Sizable increases in relative unemployment in the samples among men in miscellaneous occupations, women in bench work occupations, and both sexes in professional, technical and managerial occupations (layoffs occurred in most subgroups but managers and administrators were hardest hit) most likely indicates some softening in several areas of the local economy long known to be vulnerable to outside recessionary pressures. These include most softgoods industries, hardgoods industries which supply parts and equipment to other affected industries, and trade and service industries. It appears likely that individuals in occupations experiencing decreasing demand will find that their job prospects will continue to deteriorate slowly over the next few months, until recovery from the recession gains sufficient momentum to induce local employers to reevaluate their manpower requirements once again.

IX. Labor Supply-Demand Imbalances

The number of job openings received and filled at DES Employment Services offices both declined during 1979. Tabulations of job records for the first two quarters of fiscal years 1979 and 1980 by major occupation compiled from Employment Service Automated Reporting Systems (ESARS) tables are given in Table 17 and Table 18 on the following page:

Table 17 Job Orders Received and Filled
Compiled From ESARS
Worcester Job Bank
October 1, 1978 Through March 31, 1979

DOT	Major Occupational Category	Openings Received Number	Openings Received Percent	Openings Filled Number	Openings Filled Percent
	TOTAL	5,365	100.0	3,044	100.0
0-1	Professional, Technical and Managerial	417	7.8	105	3.4
2	Clerical and Sales	1,224	22.8	707	23.2
3	Service	738	13.7	445	14.6
4	Farming, Fishing and Forestry	128	2.4	23	0.8
5	Processing	169	3.1	85	2.8
6	Machine Trades	556	10.4	278	9.1
7	Bench Work	257	4.8	163	5.4
8	Structural Work	338	6.3	185	6.1
9	Miscellaneous	1,538	28.7	1,053	34.6

Table 18 Job Orders Received and Filled

Compiled From ESARS
Worcester Job Bank
October 1, 1979 Through March 31, 1980

DOT	Major Occupational Category	Openings Received Number	Openings Received Percent	Openings Filled Number	Openings Filled Percent
	TOTAL	4,552	100.0	2,740	100.0
0-1	Professional, Technical and Managerial	326	7.2	121	4.4
2	Clerical and Sales	1,586	34.9	1,000	36.5
3	Service	1,011	22.2	638	23.3
4	Farming, Fishing and Forestry	78	1.7	45	1.6
5	Processing	132	2.9	76	2.8
6	Machine Trades	421	9.2	236	8.6
7	Bench Work	236	5.2	172	6.3
8	Structural Work	266	5.8	147	5.4
9	Miscellaneous	496	10.9	305	11.1

Openings received overall declined by 15.2 percent over the period and total openings filled by 10.0 percent. The largest decline occurred in miscellaneous occupations (67.8 percent), which also recorded the largest decline in openings filled (71.0 percent). On the other hand, openings received and filled increased substantially in clerical and sales occupations (29.6 percent and 41.4 percent respectively) and service occupations (37.0 percent and 43.4 percent respectively). Evidently local employers in general fear declining product demand and are adjusting their manpower needs accordingly, but they are in such need of clerical help and service workers that they are still hiring qualified applicants wherever they can be found.

Only a portion of the jobseekers available, whether or not they are currently employed, seek aid through DES Job Bank Services. Hence Employment Service ESARS data do not offer a complete picture of the job market. Alternate sources of information, previously alluded to in this report, indicate severe and continuing shortages of virtually all types of skilled technical, health and clerical help. For the most part workers in these occupations should find little difficulty in obtaining and retaining employment in the area despite the upcoming recession. Only unskilled and some semiskilled workers will be adversely affected by the downturn, but these will not be long term dislocations and they can be expected to end as soon as an economic recovery occurs. Revival of the Worcester area as a tourist, convention and sales mecca will guarantee jobs for all who want them once the recession has safely passed.

Analysis of active applicants to unfilled job openings in the Job Matching Service Office indicates a ratio of three applicants to every job order. This reflects the present tightness of the labor-supply/demand balance in the Worcester Labor Market Area.

X. Summary and Conclusions

During the last five years the Worcester area economy underwent a quiet revolution, though an accelerated evolution in the Darwinian sense of survival of the fittest might be a more appropriate description of its changing nature. The economy in effect transformed itself from a traditional structure with a preponderance of its manufacturing sector employment highly vulnerable to recessionary forces to a dynamic high-technology-based structure which is far more resistant to national economic downturns. These developments took place despite the local economy having had comparatively little growth in its electronics and instruments industries, which are usually considered to be the most important high-technology components. But, Worcester has more than its share of manufacturing firms which use research and development programs to push the technologies they employ to the limits of knowledge and, by doing so, many of these firms have come to dominate several important markets. This position of dominance was not, however, acquired overnight; it required years of growth by both established and new enterprises throughout the area aided by a strong banking industry and enlightened public and private policies.

In effect the growth of Worcester's high-technology based industries drove most of the remaining traditional manufacturing industries to close or move out of the area. But growth in the newly dominant enterprise required even more skilled labor than these closings provided and the LMA now finds itself with large shortages in many occupational categories. Even a moderately severe national recession would have little effect on this state of affairs, for these firms will be forced to "stockpile" skilled labor to insure its availability when times improve. So demand will remain high for those with many kinds of occupational skills, machinists, computer programmers, health care workers and clerical help in particular.

As in the past, the strength of the manufacturing sector will be manifested in nonmanufacturing employment as well, and it is in this sector where most actual payroll increases take place. To facilitate employment growth, local officials are studying ways to expand and improve job training programs and local and regional transportation systems. They are also seeking ways to provide more jobs for unskilled workers and to induce high-technology based firms to establish themselves in more sparsely populated regions of Central Massachusetts, the Webster region in particular.

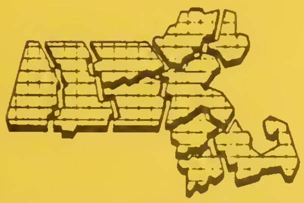
All those who have been involved in recent Worcester LMA economic developments can be justifiably proud of their achievements. Moreover the area can be expected to continue to outperform other areas in Massachusetts and the nation regardless of the state of the national economy, so that its long term future can only be considered to be bright indeed.

IAS

MASS. MA 20.27: Wo/982

ANNUAL PLANNING INFORMATION REPORT FISCAL YEAR 1982 WORCESTER LMA

GOVERNMENT DOCUMENTS
COLLECTION
JAN 18 1982
University of Massachusetts
Depository Copy



LABOR AREA RESEARCH PUBLICATION

Massachusetts Division of Employment Security

job market research

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY
Charles F. Hurley Building
Government Center, Boston, Ma. 02114

ANNUAL PLANNING INFORMATION REPORT
FISCAL YEAR 1982
WORCESTER, MASSACHUSETTS
LABOR MARKET AREA

Prepared by: Robert D. McCarthy
Sr. Labor Market Economist

Eugene J. Doody, Director

Helen B. Munzer, Director
Job Market Research

Dorothy R. Sullivan,
Chief Supervisor
Labor Market Research

Table of Contents

Page

I. Highlights and Conclusions 1

II. Area Description 2

III. Employment Developments and Outlook by Industry 9

IV. Employment Developments and Outlook by Occupation . . . 24

V. Recent Unemployment Trends and Projections 31

VI. Labor Demand and Supply Imbalances 43

VII. Individuals in Need of Employment Service 45

VIII. Workforce Training Programs 52

Appendix 55

List of Tables

1. Labor Force Composition Projected Change 7

2. Population and Labor Force Composition Projections . . . 8

3. Nonagricultural Wage and Salary Employment 14

4. Industry Share as Percent of Total Nonagricultural Employment 15

5. Ratio of Nonmanufacturing to Manufacturing Employment 16

6. Industrial Growth and Change in Annual Averages Between 1975 and 1980 Nonagricultural Wage and Salary Employment 17

Table of Contents
(continued)

Page

List of Tables (continued)

7. Industrial Growth and Decline in Annual Averages Between 1975 and 1980 Nonagricultural Wage and Salary Employment 18

8. Massachusetts Industrial Finance Agency Bond Receivers - 1980 20

9. Openings Received and Filled by Industrial Division and Occupational Category. 22

10. Job Openings Received and Filled by Major Occupational Category 26

11. Occupational Characteristics of Applicants Registered at the Job Matching Centers for the Worcester LMA 27

12. Industrial Employment Trends by 3-Digit SIC Codes . . . 29

13. Most Effected Occupations in Recession Resistant and Resilient Industries. 30

14. Comparison and Ranking of Annual Average Unemployment Rates for Larger LMA's Massachusetts Between 1975-1980 32

15. Comparison of Labor Force Data on Annual Average Basis 33

16. Monthly Labor Force Data Worcester LMA. 34

17. Labor Force Statistics Worcester LMA. 35

18. Annual Average Labor Force Data for Municipalities in Worcester LMA. 36

19. Characteristics of Insured Unemployed by Place of Residence and by Race. 37

Tables of Contents
(continued)

Page

List of Tables (continued)

20. Characteristics of Insured Unemployed for Cities/Towns Served by the Worcester and Webster Job Matching Center 39

21. Characteristics of Insured Unemployed by Place of Residence and by Race, Worcester Prime Sponsor Cities and Towns. 40

22. Labor Turnover - New Hires Worcester LMA. 41

23. Hours and Earnings of Production Workers. 42

24. Characteristics of Individuals in the Active File for Employment-Related Assistance. 47

25. Characteristics of Applicants Registered at the Job Matching Centers for the Worcester LMA. 48

26. Annual Average Labor Force Data for Municipalities Served by the Worcester Job Matching Centers. 49

27. Economically Disadvantaged 18 Years and Older Worcester CETA. 50

28. Annual Average Labor Force Data for Worcester Prime Sponsor 51

29. Worcester WIN Team Individuals Serviced October 1, 1981 - March 31, 1981. 52

1. Highlights and Conclusions

It is anticipated that the Worcester Labor Market Area's economy will continue to have one of the lowest unemployment rates of the larger metropolitan areas in Massachusetts. This optimistic outlook is based upon a number of factors. Stepped up defense spending by the new administration in Washington will benefit a number of Worcester firms. Major retooling efforts in the automobile industry to manufacture lighter and more fuel efficient vehicles should at least stabilize employment in some durable goods firms. The high technology industry is expected to create the largest number of new jobs as local firms expand their operations and others begin construction of new facilities.

Employment gains in most nonmanufacturing industries, which have accounted for overall payroll increases since the 1974-75 recession, will continue unabated. After years of being depressed the construction industry is expected to prosper with the many commercial and industrial projects currently underway or scheduled to begin in the near future. Other nonmanufacturing industries expected to show expansions in payrolls will be wholesale and retail trade and services employment. However, payrolls in government are expected to decline due to the recent Proposition $2\frac{1}{2}$ legislation combined with cuts in state and federal budgets.

I. Area Description

A. Definition of Area

The Worcester, Massachusetts Labor Market Area (LMA) is situated entirely within Worcester County. The LMA is comprised of the city of Worcester and the towns of Auburn, Berlin, Boylston, Brookfield, Charlton, Douglas, East Brookfield, Grafton, Holden, Leicester, Millbury, Northborough, Northbridge, North Brookfield, Oxford, Paxton, Rutland, Shrewsbury, Spencer, Sterling, Sutton, Upton, Uxbridge, Webster, Westborough and West Boylston.

B. Definition of CETA Prime Sponsor

The Worcester Consortium is the set of cities and towns legally sanctioned to administer all programs of the Comprehensive Employment and Training Act (CETA) under the jurisdiction of the Worcester Prime Sponsor. The Worcester Consortium consists of the city of Worcester and the towns of Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Northborough, Paxton, Rutland, Shrewsbury, Spencer, Westborough, and West Boylston.

C. Definition of Job Matching Service Centers

The Job Matching Service Centers provide four basic types of aid to job-seekers: job information, job development and placement, employment counseling and testing, and services to special applicant groups. The two Job Matching Service Centers which serve the LMA are located in the city of Worcester and town of Webster. The Worcester center provides services for the residents of the towns of Auburn, Boylston, Clinton, Grafton, Holden, Lancaster, Leicester, Millbury, Paxton, Rutland, Shrewsbury, Spencer, Sterling, West Boylston and the city of Worcester. The Webster center services the towns of Charlton, Douglas, Oxford, Sutton and Webster.

D. Geographical Description and Topography

Centrally located in Massachusetts the city of Worcester is 39 miles from Boston and 52 miles from Springfield. It is surrounded by the 25 LMA towns which totally cover an area of over 600 square miles. The area's topography is characterized as being plateau-like with gentle rolling hills and a number of picturesque lakes interspersed into the landscape. The annual average temperature is 47 degrees and ranges from a mean of 24 degrees in January to 70 degrees in July.

E. Transportation

Within the Worcester LMA there are a number of primary roadways which lead into Worcester. These major highways which move traffic into the city from the east and northeast are Route 20, 9, and 90. With the completion of Route 52 from Auburn to Webster and its connection with Route 290 East leading to Worcester and points north, commuting difficulties to the south of Worcester have been facilitated. Access to the city from other directions tends to be considerably more difficult. In the north Route 140 through Princeton does not carry enough traffic, while Route 12 through West Boylston cannot adequately bear the traffic flow required of it. This problem is being remedied by a major upgrading of Route 140 between Shrewsbury and Boylston and by construction of Route 190 to Route 2 in the Fitchburg-Leominster LMA.

ASSUMPTIONS AND PROJECTIONS FOR THE ECONOMY
COMMONWEALTH OF MASSACHUSETTS
FEDERAL FISCAL YEAR 1982 (FFY'82)

The Job Market Research staff of the Division of Employment Security gathers data; analyzes and reports on changes in the state's employment and unemployment situation. Even utilizing the most current data and computer models of the state and national economies, it is difficult to project future economic conditions. Forecasting is especially difficult during times of rapid change, such as we have been experiencing. The economic forecasts presented in this report are based on data available at the end of May, 1981.

1) Employment

Total employment in Massachusetts, reported in the Current Population Statistics (CPS) series, is expected to average 2,814,000 during FFY'82, an increase of about 30,000 from FFY'81.

Nonagricultural wage and salary jobs, reported in the Current Employment Statistics series (CES-790) is expected to average 2,731,100, an increase of 50,000 jobs from FFY'81 to FFY'82.

It is important to remember that the CPS estimates the number of people employed or unemployed based on their place of residence, whereas the CES-790 estimates the number of jobs based on employer location. Massachusetts has traditionally had a large proportion of dual job holders. Much of the job increase in services and in wholesale and retail trade will be part-time positions.

PROJECTED EMPLOYMENT BY INDUSTRY GROUP

Industry	Employment (in 000's)		
	FFY 1980 (Actual)	FFY 1981 (Projected)1/	FFY 1982 (Projected)
TOTAL NONAGRICULTURAL EMPLOYMENT	2642.2	2679.1	2731.1
Manufacturing - Total	675.7	669.1	681.6
Durable Goods	409.5	410.8	425.1
Nondurable Goods	266.2	258.3	256.5
Construction	74.8	74.3	81.7
Transportation, Communications and Public Utilities	122.0	124.8	125.2
Wholesale and Retail Trade	570.7	579.2	594.0
Finance, Insurance and Real Estate	157.6	162.5	165.4
Services	629.2	664.8	690.1
Government	412.3	404.3	393.1
Federal	58.5	57.5	56.0
State	97.5	98.6	96.6
Local	256.5	248.2	240.5

1/ Projection based on actual data for seven months and estimates for five months.

2) Unemployment

We project that Massachusetts' unemployment rate will average 5.7 percent during FFY'82, down from 5.9 percent in FFY'81 and one to one-and-a-half percentage points below the national average of 6.9 percent in FFY'82.

	MASSACHUSETTS				U.S.
	Labor Force (in 000's)	Employment (in 000's)	Unemployment (in 000's)	Unemp. Rate(%)	Unemp. Rate(%)
FFY'80	2863.6	2703.3	160.3	5.6	6.8
FFY'81	2957.1	2783.8	173.3	5.9	7.4
FFY'82	2984.1	2814.0	170.1	5.7	6.9

3) Labor Turnover in Manufacturing

Due to a strengthening economy, the number of layoffs is anticipated to decline in FFY'82. On the other hand, the level of quits may also be comparatively low, reflecting in part some uncertainty among the labor force about the strength of the job market. Recalls, which are a function of prior layoffs will be low. The growth in the durable goods industries will be reflected in a stronger rate of new hires.

4) Wages and Inflation

Wages are expected to increase by 8.7 percent, down slightly from the 9.5 percen increase in FFY'81. Total Massachusetts personal income, however, is expected to rise by nearly 11.5 percent. If the proposed decrease in federal personal income taxes takes effect, total disposable income may rise by as much as 12.5 percent. For the first time in several years, the increase in personal income will be greater than the rate of inflation. The era of double-digit inflation is expected to end during FFY'82. The projected increase in the Boston Consumer Price Index (CPI) is 8.7 percent, down from the 11.4 percent in FFY'81. Massachusetts' FFY'81 and '82 rates are both below the national CPI increases for these periods.

5) Credit

Consumers wanting loans of any type; mortgage, home repair, car, or personal; will find that the supply of money will continue to be very tight, with interest rates remaining variable but high throughout FFY'82. Currently, interest rates on home mortgages are over 16 percent, on personal loans over 18 percent, and on commercial and construction loans about 20 percent, however, loans are being made at both higher and lower rates. Banks and credit unions have significantly decreased or stopped making certain kinds of loans altogether.

A major cause of the tight money situation is the shift of money from regular savings accounts, where rates are limited by law, to savings certificates, money market accounts, and treasury obligations. All interest rates are sensitive to changes in U.S. Treasury and Federal Reserve Bank Policies. The size of the Federal tax cut and of the Federal budget deficit will influence the amount and cost of credit in FFY'82. More loan money is expected to go to commercial borrowers next year rather than to those purchasing homes or cars.

There are several pieces of legislation pending before Congress which are expected to affect the level of savings, and thus the amount of credit available. Perhaps the most important is the tax cut, which will increase the amount of disposable (and potentially savable) income. Congress is also considering bills that would: 1.) free certain amounts of savings income from taxes, and 2.) gradually lift the restrictions on the amount of interest banks can pay on passbook accounts.

6) Defense Contracts

Defense contract spending is expected to increase. The dollar value of military prime contracts going to Massachusetts firms has been over five percent of the total awarded nationally for the last three years. We expect our percentage share of the awards to remain steady or increase slightly. With the proposed increase in military spending in the coming years, defense contracts in Massachusetts should provide strong support for the state's economy.

7) Energy

Energy costs are not expected to rise as rapidly during FFY'82 as they have in the recent past. From January 1979 to January 1981 the average price for a gallon of home heating oil rose 104.7 percent in Massachusetts. Continued conservation and conversion to less expensive energy sources will help to hold future prices down. The industrial mix in Massachusetts is not, relatively, energy intensive, therefore, we do not expect that rising energy costs will hurt our industrial production to the extent it may in the rest of the nation. The present world oil glut should moderate gasoline and oil prices. The unknown in the energy situation remains Mideast political conflicts.

8) Exports

Massachusetts will continue to rank among the top ten states exporting manufactured products. Our leading exports will remain high technology equipment: instruments, electronic equipment, and computers. The actual demand for these products will be influenced by the rate of economic recovery in the European Common Market countries.

Table 1

Labor Force Composition Projected Change
1970 - 1982
Worcester LMA

Race and Age	April 1, 1970	July 1, 1982	Change 1970 to 1982	
			Number	Percent
TOTAL	159,902	190,863	30,961	19.4
White Males	96,538	103,243	6,705	6.9
16-17	3,554	6,202	2,648	74.5
18-19	4,080	5,807	1,727	42.3
20-24	9,467	14,337	4,870	51.4
25-34	18,540	21,045	2,505	16.9
35-44	18,766	19,000	234	1.3
45-64	37,189	31,895	-5,294	-14.2
65+	4,942	4,957	159	0.3
White Females	61,615	85,259	23,644	38.4
16-17	2,957	6,751	3,794	128.0
18-19	3,660	5,495	1,835	50.0
20-24	7,712	12,699	4,987	64.7
25-34	8,248	15,879	7,631	92.5
35-44	10,812	15,446	4,634	42.9
45-64	25,324	25,968	644	2.5
65+	2,902	3,021	119	4.1
Nonwhite Males	953	1,160	207	21.7
16-17	28	119	91	325.0
18-19	28	33	5	17.9
20-24	101	152	51	50.5
25-34	251	263	12	4.8
35-44	249	236	-13	-5.2
45-64	246	306	60	24.4
65+	50	51	1	2.0
Nonwhite Females	796	1,201	405	50.9
16-17	10	122	112	1,120.0
18-19	65	124	59	90.8
20-24	113	241	128	113.3
25-34	223	219	-4	-1.7
35-44	128	202	74	57.8
45-64	194	229	35	18.0
65+	63	64	1	1.6

Source: Massachusetts Division of Employment Security

Table 2

Population and Labor Force Composition Projections
Fiscal Year 1982
Worcester LMA

Category	Population	Labor Force	Employment	Unemploy-ment	Unemploy. Rate	Labor Force Participation Rate
TOTAL	365,420	190,863	178,457	12,406	6.5	66.9
White Male	173,026	103,243	96,825	6,418	6.2	77.8
0-15	40,319	--	--	--	--	--
16-17	7,657	6,202	5,380	822	13.3	81.0
18-19	7,801	5,807	4,852	955	16.5	74.4
20-24	17,491	14,337	13,445	892	6.2	82.0
25-34	21,115	21,045	19,941	1,104	5.2	99.6
35-44	19,068	19,000	18,332	668	3.5	99.6
45-64	39,700	31,895	30,272	1,623	5.1	80.3
65+	19,875	4,957	4,603	354	7.1	24.9
White Female	186,882	85,259	79,583	5,676	6.7	57.3
0-15	38,218	--	--	--	--	--
16-17	7,141	6,751	6,171	580	8.6	94.5
18-19	7,276	5,495	5,103	392	7.1	75.5
20-24	15,897	12,699	12,086	613	4.8	79.8
25-34	22,392	15,879	15,245	634	4.0	70.9
35-44	20,446	15,446	14,710	736	4.7	75.5
45-64	44,137	25,968	23,770	2,198	8.5	58.8
65+	31,375	3,021	2,498	523	17.3	9.6
Nonwhite Male	2,711	1,160	939	221	19.0	61.5
0-15	826	--	--	--	--	--
16-17	166	119	91	28	23.5	71.7
18-19	169	33	25	8	24.2	19.5
20-24	329	152	116	36	23.7	46.2
25-34	360	263	209	54	20.5	73.1
35-44	268	236	204	32	13.5	88.1
45-64	434	306	247	59	19.3	70.5
65+	159	51	48	3	5.8	32.1
Nonwhite Female	2,801	1,201	1.109	92	7.6	61.9
0-15	861	--	--	--	--	--
16-17	158	122	112	10	8.2	77.2
18-19	160	124	117	7	5.6	77.5
20-24	338	241	234	7	2.9	71.3
25-34	271	219	202	17	7.7	80.8
35-44	340	202	187	15	7.4	59.4
45-64	411	229	200	29	12.7	55.7
65+	260	64	57	7	10.9	24.6

Source: Massachusetts Division of Employment Security

III. Employment Developments and Outlook by Industry

A. Industry Review and Outlook

Comparison of average nonagricultural employment totals between fiscal year 1980 and projected fiscal year 1981 show an overall decline of 1,300 jobs in the Worcester labor market area. The job losses are chiefly in the durable goods subsector of manufacturing which mirrors the recessionary forces at play on a national level. However, bolstering the local economy have been employment gains in the nonmanufacturing sector, which has demonstrated vitality over the past fiscal year. A composite picture of industrial employment in both sectors is given in Table 3.

The economic fortunes of the manufacturing firms within the LMA are closely tied to the national economy because of the high volume of capital goods which are shipped out of the region. Reverberations from fluctuations in the nation's economy are acutely felt locally. Presently the local effects of the recession have been most apparent in the fabricated metals industry. A component of the fabricated metals industry which has been beset by employment losses has been those firms which produce low and high carbon wire. Job losses have occurred because of sharp declines in domestic auto sales and new home construction. However, other factors have contributed to payroll reductions in the industry. Greater competition from abroad, particularly Japan, has sharply curtailed foreign exports. In addition the fuel intensive nature of the manufacturing process puts all regional fabricated metal manufacturers at a competitive disadvantage because of their reliance upon foreign crude oil. Many manufacturers have seen a doubling in energy related costs over the year. Also affecting the operating cost of metal producers have been costs associated with adhering to rigid guidelines established by the Environmental Protection Agency (EPA) governing clean air and water standards.

Payroll declines in nonelectrical machinery were partially attributable to the closing of the Crompton & Knowles Corp. At the time of its closing the plant employed over 200 persons; however in its heydays during the 1950's the firm employed 2,800 persons. The Worcester firm was one of the world's largest manufacturers of textile looms and parts. Competition from firms outside the United States and the development of "miracle" fabrics in this country led to the demise of the corporation. Declines in employment in the other durables subsector is also highly subject to the vicissitudes of the national economy. A large share of the products made by local employers in this group are used in the manufacture of automobiles and transportation equipment. However, the impact of the loss was mitigated by local firms' policies of making workforce adjustments by attrition and retirement whenever possible, rather than totally relying upon outright layoffs.

The nondurable goods subsector of manufacturing, which includes such industries as textiles, apparel, paper products, leather goods and miscellaneous manufacturing, declined by 1,100 jobs or 6.5 percent between Fiscal Year 1979 and 1980. The prime reason for the general declines is due to a softness in retail sales of consumer products by wholesalers and retailers this is the result of high unemployment rates in other areas of the nation, double digit inflation which has undermined consumers disposable income and higher interest and carrying cost for consumer credit. The depressed nature of these industries has measurably contributed to declines in textiles payroll. A large purchaser of textiles products is the automobile industry which uses the fabrics for floor covering and upholstery on seats. Also, cutbacks in new home construction have reduced sales for textiles and textile related products associated with the furnishing of homes. In addition to feeling the sluggishness of consumer spending the apparel and leather products industries have been losing markets to foreign competition in recent years.

It has been nonmanufacturing employment which has carried the Worcester LMA in jobs creation over the past few years. In Fiscal Year 1979 there were 114,800 jobs in nonmanufacturing industries; by projected Fiscal Year 1981 employment in the sector is anticipated to grow to 117,300 jobs. an increase of 2.2 percent. A detailed explanation of the economic forces affecting each nonmanufacturing subsector follows.

Employment in the construction industry has come out of the economic doldrums of Fiscal Year 1979. In that fiscal year employment in the industry stood at 4,900 jobs; by Fiscal 1980 that figure grew by 900 jobs. Projected Fiscal Year 1981 estimates show continued vitality for the construction trade industry with employment expected to reach 6,500 jobs. The reason for the strong rebound has been due to new plants and expansion projects involving commercial, retail and industrial enterprises. The large projects that have utilized the skills of a variety of construction tradesmen over a prolonged period of time, and will continue to do so, are primarily associated with the defense and high technology industries. Leading the vanguard of construction in the high technology industry has been Digital Equipment Corporation, headquartered in Maynard, Massachusetts. The firm has completed work on a $25 million building in Hudson and is preparing to begin work on a $25 million plant addition in Marlboro. Digital has in the planning stage a two building project in Shrewsbury which would include a single - story 200,000 square foot manufacturing plant and a two - story 300,000 square foot engineering plant. In Westboro, Astra Pharmaceutical built a $35 million structure.

Reaping the benefits of increased federal defense spending, which is spurring construction work, is GTE in Westboro and Raytheon in Northboro. The GTE plant which will be used to design components of the MX missile program is valued at $20 million while the Raytheon project has a price tag of $15 million.

Construction work on the revitalization of downtown Worcester will create hundreds of new jobs in the industry.* The infusion of private investment capital into the core city demonstrates the high level of confidence investors have in the future of Worcester. The interest in the downtown by developers involves using properties for a variety of uses. Not only has retail space increased in value causing the renovation of a number of abandoned buildings, but much square footage is earmarked for use as office space, independent operations, personal services, and research and development firms. The present construction of the Worcester Civic Center and Marriott Hotel is also providing numerous construction trade jobs. The construction activity in the city will act to generate more new construction and rehabilitation work as property values continue to rise. It is also highly likely that the snowballing effect will create new apartment and condominium construction to house the large numbers of people who will be employed downtown. However, construction in the housing industry continues to be depressed with individuals or families attempting to build new homes will be faced with greater financial obstacles associated with the high cost of land, mortgage money, labor and materials.

* MIFA Bonds and UDAG grants have spurred some construction.

Another subsector which comprises a large share of jobs in manufacturing is the services industry. Growth in this industry has also been strong over the last couple of years. In Fiscal Year 1979 32,200 persons were on services payroll while the figure climbed to 33,300 in Fiscal Year 1980, an increases of 1,100 jobs or 3.4 percent. Fiscal Year 1981 projections show continued growth but at a slower rate. Included in the services industry is a diverse group of establishments which range from hotels, educational services, health and business services to amusement and recreational services. In the Worcester LMA most of the new jobs created have been in the health care field with the ongoing staffing of the University of Massachusetts Medical complex requiring the single largest number of health care personnel. Another service industry exhibiting growth was business services were gains were posted in advertising, news syndicates and, most recently, in establishments providing data processing services to others.

Employment in the transportation and public utilities group increased from a Fiscal Year 1979 annual average of 6,900 employees to 7,300 projected in Fiscal Year 1981, an increase of 5.8 percent. The consistent but moderate growth in this subsector should continue in the future. Another subsector that has shown steady growth has been the finance, insurance and real estate group. Between Fiscal Year 1979 and Fiscal Year 1981 payrolls in the subsector have grown from 8,800 jobs to 9,300 for an increase of 5.7 percent. A large share of the jobs created were in the banking industry. Expansion of this industry is attributed to the proliferation of branch banking into the suburbs and a general expansion in the scope of services being offered. Growth in the real estate industry is tied to a combination of factors. The relatively recent phenomenon of national real estate franchising organizations has permitted individuals to easily enter the brokerage business. In addition to the ease of entry into the field, commissions from skyrocketing prices of real estate properties have induced many persons to enter into the business.

It is the wholesale and retail industry group which employs the largest number of individuals in the nonmanufacturing sector. Between Fiscal Year 1979 and Fiscal Year 1980 employment in the industry remained flat but projections for Fiscal Year 1981 show a loss of 600 jobs. The job losses are tied to a number of factors; soaring energy costs, recession, inflation and supermarket closings. Although the recession has been less severe in the Worcester LMA than in other parts of the state and nation its effects are nevertheless felt locally. The wholesale and retail trade industry is particularly vulnerable during periods of recession as consumers become more selective or postpone buying high priced items such as furniture or home appliances - items which are not considered absolute necessities. However, declines in sales volume which ultimately affect employment levels may have been greater if not for the paradox of inflation. Consumers faced with unabated double digit inflation that has been surpassing hourly wage increases in pay may decide to purchase products in anticipation of continuous escalation in product prices. Wholesale and retail merchants who are unable to pass on to consumers costs incurred by skyrocketing energy costs are likely to implement cost cutting measures in other areas such as the elimination of certain services, shorter store hours or reductions in the number of employees. The closing of all the stores in the Finast Supermarket chain had a negative impact on total employment in the industry. Somewhat blunting the effects of the closings were the reopening of a number of the stores under new owners and new names. Also aiding retail employment was the addition to the Worcester area economy of two national discount retailers. Caldor Inc. opened a store in Worcester's Country Club Plaza and began building another outlet in Westboro. K Mart opened a store at Webster Plaza.

Government employment has declined from 26,800 persons employed in the sector in Fiscal Year 1979 to 26,000 jobs projected for Fiscal Year 1981. It is likely that reverberations from Proposition $2\frac{1}{2}$ legislation combined with federal budget reductions will affect each municipality's payrolls in the Worcester LMA. However, it would be premature to speculate on the number of workers who may lose their jobs.

Table 3

Worcester LMA
Nonagricultural Wage and Salary Employment
by Major Industries
(in thousands)
FY 1979 - FY 1982

Industry	Annual Average		Projected Annual Average	
	FY 1979	FY 1980	FY 1981	FY 1982
Total Nonagricultural Employment	165.0	166.3	165.0	161.2
Manufacturing Employment	50.2	49.7	47.7	45.6
Durable Goods	33.2	33.8	31.5	29.3
Primary Metals	2.1	2.1	2.0	2.0
Fabricated Metals	9.5	9.3	8.7	8.0
Machinery (exc. Electrical)	11.3	12.3	11.3	10.3
Other Durable Goods	10.3	10.1	9.5	9.0
Nondurable Goods	17.0	15.9	16.2	16.3
Textiles	4.3	3.8	3.9	4.0
Leather	2.0	2.0	2.1	2.1
Other Nondurable Goods	10.7	10.1	10.2	10.2
Nonmanufacturing	114.8	116.6	117.3	115.6
Construction	4.9	5.8	6.5	7.2
Trans. & Public Utilities	6.9	7.1	7.3	7.2
Wholesale & Retail Trade	35.2	35.2	34.6	32.7
Fin., Ins., & Real Estate	8.8	9.1	9.3	9.5
Services	32.2	33.3	33.6	33.2
Government	26.8	26.1	26.0	25.7

Source: Massachusetts Division of Employment Security

Table 4

Worcester LMA
Industry Share as Percent of Total Nonagricultural Employment

Industry Title	Percent of Total Nonagricultural Employment		
	1978	1979	1980
Nonagricultural Total	100.0	100.0	100.0
Manufacturing Total	29.5	30.5	30.0
Durable Goods	18.6	20.4	20.1
Fabricated Metals	5.7	5.7	5.5
Nondurable Goods	10.9	10.1	9.5
Nonmanufacturing Total	70.5	69.5	70.4
Construction	2.8	3.1	3.6
Transportation & Public	4.2	4.2	4.3
Utilities	4.2	4.2	4.3
Wholesale & Retail Trade	21.4	21.4	21.2
Finance Ins. Real Estate	5.3	5.4	5.5
Services	19.2	19.5	20.0
Government	17.6	16.0	15.8

Source: Current Employment Statistics Program (BLS-790)
Massachusetts Division of Employment Security

Table 5

Ratio of Nonmanufacturing to Manufacturing Employment Worcester LMA*

Fiscal Year	Nonmanufacturing	Manufacturing
Fiscal Year 1979	2.29	1
Fiscal Year 1980	2.35	1

* Source: Massachusetts Division of Employment Security

Table 6

Worcester LMA
Industrial Growth and
Change In Annual Averages Between 1975 and 1980
Nonagricultural Wage and Salary Employment

Bank	Net Change	Industry
1	7,200	Services
2	4,400	Wholesale & Retail Trade
3	4,100	Fabricated Metals
4	3,700	Machinery (Except Electrical)
5	2,100	Government
6	1,700	Other Durable Goods
7	1,700	Construction
8	1,100	Finance
9	500	Transportation, Comm., Utilities
10	100	Other Nondurable Goods
11	100	Leather
12	100	Textile
13	-2,400	Primary Metals

Table 7

Worcester LMA
Industrial Growth and Decline
In Annual Averages Between 1975 and 1980
Nonagricultural Wage and Salary Employment

Rank	Percent Change	Industry
1	80.0	Fabricated Metals
2	45.0	Machinery (Except Electrical)
3	40.0	Construction
4	27.6	Services
5	20.0	Other Durable Goods
6	14.3	Wholesale & Retail Trade
7	13.7	Finance
8	8.7	Government
9	7.5	Transportation Comm., Utilities
10	5.3	Other Nondurables
11	5.1	Leather
12	2.7	Textiles
13	-53.0	Primary Metals

B. Job Creation Incentives and Employment

Hundreds of jobs in the Worcester economy have been created as a result of the Massachusetts Industrial Finance Agency (MIFA) which is referred to on Table 8. The agency approves tax - exempt low interest bonds for area firms throughout the state. The MIFA was established by the state legislature to encourage businesses to locate, remain and grow in Massachusetts by offering four incentive programs. The first is industrial revenue bonds which are loans by lending institutions for real estate and equipment. These bonds are tax - exempt loans by lending institutions which are able to loan money at more favorable rates because the lender does not have to pay federal taxes on the interest payment of this type of loan. The second component of the program allows for tax-exempt financing for commercial businesses located in urban areas which have been designated as in need of economic revitalization. The third MIFA program is for mortgage insurance for loans to smaller firms for plant expansions and the hiring of additional employees. The final component of the program is for tax - exempt financing for pollution control measures for Massachusetts firms.

Programs Announced to Benefit Small Businesses

DEPARTMENT OF DEFENSE AND SMALL BUSINESS

The Department of Defense has started a three phase program to better utilize the potential of the smaller high technology firms in approximately 20 research and development project areas of particular interest to the armed forces. Under Phase I, six month awards of as much as $50,000 will be used for preliminary R & D to show the feasibility of the proposals submitted. Advanced development contracts of $100,000-$500,000 will be awarded to the most promising projects under Phase II; these contracts will have a maximum duration of two years. Phase III will entail followup Defense Department awards if appropriate and necessary, and/or privately funded commercial application. For further details write Hal C. Fisher, Director of Small Business and Economic Utilization Policy, Room 2A-340 at the Pentagon, Washington, D.C. 20301.

PASS PROGRAM

To improve potential government contract and subcontract opportunities for small businesses, the Small Business Administration has developed its Procurement Automated Source System (PASS). Using the latest computer technology, PASS is designed to boost the number of government contracts awarded to small firms. PASS permits small firms to register their capabilities and have them matched with the needs of the procuring federal agencies. Small businesses which manufacture: textiles; clothing; electronics; production equipment; medical, dental, and opthalmic goods; and which are in "labor surplus areas", may wish to register with PASS in order to increase the probability of receiving defense procurement contracts.

Table 8
Worcester LMA
Massachusetts Industrial Finance Agency Bond Receivers - 1980

Name of Company	Location	Estimated Jobs Created
Nanlo Inc	Auburn	16
Wyman Gordon Co.	Worcester	50
G.F. Wright Steel & Wire Co.	Worcester	14
Jamesbury Corp.	Shrewsbury	200
Elkay Products Inc.	Shrewsbury	30
Polvinyl Films Inc.	Sutton	45
L & P Converters	Charlton	65
Carl Garden Industries	Worcester	20
Wachusetts Molding Corp.	Worcester	31
Lavigne Press Inc.	Worcester	5
O.S. Walker Co.	Worcester	15
Worcester Inn Ass. Marriott Inn	Worcester	250
W.J. Don	Westboro	15
Quabaug Rubber Co.	North Brookfield	5
M.B. Metals, Inc.	Worcester	-
Millbrook Distributors	Leicester	30
Northboro Realty Trust	Worcester	140
Bernot Yarn & Craft Corp.	Uxbridge	16
Madison Wire & Cable Corp.	Worcester	35
Total		982

Source: Worcester Chamber of Commerce

C. Job Placement Data by Industry

Table 9, Job Openings Received and Filled by Industrial Division and Occupational Category shows that of the 4,110 openings received (over 3 days) by the Job Service Centers in the SMSA, 2,769 were filled in the first 6 months of Fiscal Year 1982. Of the 2,769 jobs filled 1,055 or 38.1 percent were in the Wholesale and Retail Trade Industry. The high number of jobs openings received and filled in the Wholesale and Retail Trade Industry in part reflects new retail store openings and expansions, high labor turnover, numberous part-time employees in the industry and also the surge of hires during the Christmas season. Other industrial divisions receiving large shares of new hires includes manufacturing where 658 person were added to local payrolls, and services, where employment was increased by 561.

Table 9

TABLE A10 - OPENINGS OVER 3 DAYS 03/31/81 MASSACHUSETTS SMSA 9240
OPENINGS RECEIVED AND FILLED BY INDUSTRIAL DIVISION AND OCCUPATIONAL CATEGORY

ITEM NO	OCCUPATIONAL CATEGORIES AND DIVISIONS		TOTAL	AGR FOR & FISH	MINING	CONSTR	MFG	TRANSP & UTIL	WHS & RETAIL TRADE	FINANCE INS & REAL ESTATE	SERVICES	PUBLIC ADMINISTRATION	GOVT
A	B		C	D	E	F	G	H	I	J	K	L	M
	OPENINGS RECEIVED												
A10010	TOTAL		4110	30	0	90	957	249	1345	140	954	345	360
A10015	0-1	PROF TECH MGR	314	0	0	1	66	7	24	24	116	76	80
A10020	20-24	CLERICAL	994	0	0	11	58	11	312	100	320	162	189
A10025	25-29	SALES	518	0	0	0	6	0	492	5	14	1	0
A10030	30	DOMESTIC	30	0	0	0	1	0	0	0	28	1	1
A10035	31-39	OTHER SERVICES	628	0	0	2	20	4	229	4	349	20	32
A10040	4	FARM F & F	85	27	0	1	0	0	0	2	46	9	6
A10045	5	PROCESSING	99	0	0	0	91	0	7	0	1	0	0
A10050	6	MACHINE TRADES	230	0	0	0	233	5	20	0	22	0	0
A10055	7	BENCH WORK	218	0	0	0	198	0	5	0	15	0	1
A10060	8	STRUCTURAL	186	0	0	69	30	1	6	4	26	50	47
A10065	90-91	MOTOR FRGT, TRANSP	131	1	0	4	8	62	48	0	6	2	1
A10070	92	PKG MTRL HNDL	621	2	0	2	244	159	202	0	9	3	1
A10075	93-97	OTHER	6	0	0	0	2	0	0	1	2	1	2
	OPENINGS FILLED												
A10085	TOTAL		2769	30	0	71	658	110	1055	62	561	222	230
A10090	0-1	PROF TECH MGR	115	0	0	1	31	1	12	0	31	39	40
A10095	20-24	CLERICAL	690	0	0	5	33	3	243	51	218	137	139
A10100	25-29	SALES	427	0	0	0	2	1	413	6	4	1	0
A10105	30	DOMESTIC	11	0	0	0	0	0	0	0	11	0	0
A10110	31-39	OTHER SERVICES	453	0	0	2	13	3	179	1	249	6	19
A10115	4	FARM F & F	37	28	0	1	0	0	0	2	1	5	4
A10120	5	PROCESSING	72	0	0	0	68	0	4	0	0	0	0
A10125	6	MACHINE TRADES	180	0	0	0	150	7	11	0	12	0	0
A10130	7	BENCH WORK	136	0	0	0	123	0	2	0	11	0	1
A10135	8	STRUCTURAL	135	0	0	55	31	1	5	2	13	28	24
A10140	90-91	MOTOR FRGT, TRANSP	80	1	0	5	3	31	36	0	2	2	1
A10145	92	PKG MTRL HNDL	431	1	0	2	203	63	150	0	9	3	1
A10150	93-97	OTHER	2	0	0	0	1	0	0	0	0	1	1
	FILL RATE												
A10160	TOTAL		67.4	100.0	0.0	78.9	68.8	44.2	78.4	44.3	58.8	64.3	63.9
A10165	0-1	PROF TECH MGR	36.6	0.0	0.0	100.0	47.0	14.3	50.0	0.0	26.7	51.3	50.0
A10170	20-24	CLERICAL	69.4	0.0	0.0	45.5	56.9	27.3	77.9	51.0	68.1	75.3	73.5
A10175	25-29	SALES	82.4	0.0	0.0	0.0	33.3	0.0	83.9	120.0	28.6	100.0	0.0
A10180	30	DOMESTIC	36.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.3	0.0	0.0
A10185	31-39	OTHER SERVICES	72.1	0.0	0.0	100.0	65.0	75.0	78.2	25.0	71.3	30.0	59.4

SMSA 9240

MONTHLY YEAR TO DATE
FOR PERIOD ENDING 03/31/81 PAGE 001

Table 9 (Continued)

TABLE A10 - OPENINGS OVER 3 DAYS 03/31/81 MASSACHUSETTS SMSA 9240

OPENINGS RECEIVED AND FILLED BY INDUSTRIAL DIVISION AND OCCUPATIONAL CATEGORY

ITEM NO	OCCUPATIONAL CATEGORIES AND DIVISIONS	OPENINGS BY INDUSTRIAL DIVISION										
		TOTAL	AGR FOR & FISH	MINING	CONSTR	MFG	TRANSP & UTIL	WHS & RETAIL TRADE	FINANCE INS & REAL ESTATE	SERVICES	PUBLIC ADMINISTRATION	GOVT
A	B	C	D	E	F	G	H	I	J	K	L	M
A10190 4	FARM F & F	43.5	103.7	0.0	100.0	0.0	0.0	0.0	100.0	2.2	55.6	66.7
A10195 5	PROCESSING	72.7	0.0	0.0	0.0	74.7	0.0	57.1	0.0	0.0	0.0	0.0
A10200 6	MACHINE TRADES	64.3	0.0	0.0	0.0	64.4	140.0	55.0	0.0	54.5	0.0	0.0
A10205 7	BENCH WORK	62.4	0.0	0.0	0.0	62.1	0.0	40.0	0.0	73.3	0.0	100.0
A10210 8	STRUCTURAL	72.6	0.0	0.0	79.7	103.3	100.0	83.3	50.0	50.0	56.0	51.1
A10215 90-91	MOTOR FRGT, TRANSP	61.1	100.0	0.0	125.0	37.5	50.0	75.0	0.0	33.3	100.0	100.0
A10220 92	PKG MTRL HNDL	69.4	50.0	0.0	100.0	83.2	39.6	74.3	0.0	100.0	100.0	100.0
A10225 93-97	OTHER	33.3	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	100.0	50.0

SMSA 9240

MONTHLY YEAR TO DATE
FOR PERIOD ENDING 03/31/81 PAGE 002

IV. Employment Developments and Outlook by Occupation

A. Job Openings Received and Filled by Occupational Category and Hourly Rate

ESARS Table BO 7 which is included in the appendix shows that in the first 6 months of Fiscal Year 1981 4,354 job orders were received by the Employment Service offices in the Worcester LMA. Of the 435 orders received 3,009 were filled for a placement rate of 69 percent. For comparison purposes during the first 6 months of Fiscal Year 1979 4,971 job orders were received. Of these 3,157 were filled for a placement rate of 64 percent. In the first half of Fiscal Year 1981 almost one-quarter of all job orders received were in the clerical field. The three largest categories, clerical, services and material handlers made up 2,479 openings or 57 percent of all orders received. The average hourly pay for the orders was $4.25 per hour. The disparity between orders received and jobs filled can be due to a number of factors. A shortage of available registered applicants in specific fields such as electrical engineers or machinists can create demand/supply imbalances. Other reasons for jobs remaining unfilled can be due to job applicants' inability to meet experience requirements, job applicants' insufficient educational background, lack of transportation, or simply low pay. To enhance job matching capabilities the DES has acquired a UNIVAC - developed on line computer system which will permit a job applicant's qualifications to be matched to an employer over the telephone lines instantaneously. This on-line data entry capability is available in all DES offices statewide. It will also keep applicant's files up to date and improve the quality of file searches to fit employers' labor needs.

B. Openings Received and Filled by Industrial Division and Occupational Category

ESARS Table 10, which appears in the Appendix shows the distribution of the 4,354 job openings received during the first 6 months of Fiscal Year 1981 by industrial division. The largest proportion of job openings were in the nonmanufacturing sector with wholesale and retail trade and services accounting for 55 percent of all orders received. Employment openings in manufacturing employment made up 23 percent of all openings but shows a relative decline in its percentage of all employment which is occurring not only in the LMA but throughout the state and nation. In all those geographic sectors of the economy, manufacturing employment has been slipping as nonmanufacturing industries have created the bulk of new jobs in the 1970's.

C. Occupational Demand and Supply Comparisons

ESARS Table 96 for the state and the Worcester LMA appears in the Appendix. The tables gives the number of applicants and nonagricultural job openings by occupation. Total job openings received for the first 6 month period of Fiscal Year 1981 through March 31, 1981 for the state were 61,560 and 4,321 for the Worcester LMA. The Worcester LMA therefore comprised 7.0 percent of the total job orders received statewide.

On the same table, total registered applicants which reflects the supply of labor showed that in Massachusetts 247,718 persons were either seeking employment or employment related services in all the DES offices statewide. The Worcester LMA had 14,097 or 6.0 percent of the labor supply in the state.

D. Job Bank Openings and Average Pay

ESARS Table B07 shows the Openings Received and Filled by Occupational Category and Hourly Wage Rate in the Worcester LMA. Of the 652 openings filled by the local Employment Service office, the average pay was $3.90 per hour. Not suprisingly the highest average pay was in occupations which required greater skill and/or educational levels. Openings filled in professional, technical, and managerial occupations averaged $4.78 per hour; machine trade occupations averaged $4.96 per hour, while structural work occupation, which include all the building trades, averaged $4.47 per hour. On the low end of the wage scale were occupations which require lower skill and/or educational levels. These included occupations in farming, bench work assembly, and processing occupation.

Table 10
Job Openings Received and Filled
By Major Occupational Category
Worcester LMA

Occupational Group	Openings			
	Received		Filled	
	Number	Percent	Number	Percent
Total All Groups	4,354	100.0	3,009	100.0
Professional, Technical, Managerial	317	7.2	116	3.9
Clerical	1,041	23.9	734	24.4
Sales	519	11.9	428	14.2
Domestic	31	0.7	12	0.4
Other Services	629	14.4	454	15.1
Farming, Fishing, Forestry	85	2.0	37	1.2
Processing Occupations	104	2.4	77	2.6
Machine Trades	280	6.4	180	6.0
Bench Work	220	5.0	138	4.6
Structural Work	187	4.3	135	4.5
Motor Freight Transportation	132	3.0	81	2.7
Packing Material Handling	805	18.5	615	20.4
All Other	6	0.1	2	0.1

Source: ESARS Table 10 October 1, 1980 - March 1981

Table 11

Occupational Characteristics of Applicants Registered at the Job Matching Centers for the Worcester Labor Market Area
March 1981

Occupational Code, Category, and Occupational Title	Total Applicants	Total Active Applicants	Total Unfilled Job Openings	Active Applicants to Unfilled Job Openings
0-1 Professional, Technical & Managerial	1,723	799	184	4/1
Counselor	61	30	6	5/1
2 Clerical and Sales	3,448	1,468	315	5/1
Secretary	183	104	12	9/1
3 Service	2,510	1,341	336	4/1
Kitchen Helper	178	69	16	4/1
4 Agriculture, Fishery, Forestry & Rel.	169	88	45	2/1
5 Processing	364	167	18	9/1
Injection Mold Operator	31	12	0	12/0
6 Machine Trades	1,323	597	90	6/1
Automobile Mechanic	102	39	6	6/1
7 Bench Work	671	323	73	4/6
Small Products Assembler	86	41	0	41/0
8 Structural Work	1,137	509	67	7/1
9 Miscellaneous	445	174	170	6/1
Material Handler	1,202	426	98	4/1

Source: ESARS Table 96

E. Vocational Education Programs - Occupational Training

The following list provides the results of a survey conducted in 1979 of the courses offered at the vocational technical schools in the Worcester LMA.

- Machine Shop
- Auto Technical
- Carpentry
- Metal Fabrication
- Graphic Arts
- Electrical Wiring
- Drafting
- Food Trades
- Electronics
- Auto Body Repair
- Painting and Decorating
- Commercial Design
- Plumbing
- Data Processing
- Cabinet Making
- Agriculture and Landscaping
- Distribution Education
- Small Engine Repair
- Health Services
- Cosmetology
- Air Condition & Refrigeration
- Dietary - Homemaking
- Plant Maintenance

F. Recession- Resistant and Recession-Resilient Industries

A prime consideration in vocational education is that students not be trained for jobs that are overly sensitive to economic downturns. Examining trends in employment over the 1974-1977 period helps indicate which industries, and by inference which occupations, are recession - resistant (not effected by cyclical downturns) and recession resilient (recover relatively quickly from an economic decline). A compilation of the results of such an analysis for industries by 3 - digit Standard Industriel Classification (SIC) Code in the Worcester Labor Market Area over this period is presented in Table 12.

Independent studies of manpower use can help pinpoint which specific occupations are most likely to benefit in the future from the resistance or resilience to economic downturns. Table 13 contains those occupations, with the exception of building services, which uses mainly low skilled maintenance personnel, which are prevelent in the industries analyzed.

Table 12
Industrial Employment Trends By 3-Digit SIC Code and Their Interpretations Worcester Labor Market Area (1974-1977)

Industry	SIC Code	Employment Ratios		Industry Designation
		1977 to 1974	1975 to 1974	
Drugs	283	1.33	1.27	Resistant
Misc. Plastics	307	1.23	0.83	Resilient
Cutlery, Hand Tools, Hardware	342	1.26	0.85	Resilient
Eating & Drinking Places	581	1.13	0.99	Resistant
Insurance Agents and Brokers	641	1.11	1.01	Resistant
Building Services	734	1.30	1.06	Resistant
Personnel Supply Services	736	4.98	3.43	Growth
Physicians Offices	801	1.16	1.04	Resistant
Dentists Offices	802	1.12	1.05	Resistant
Hospitals	806	1.10	1.01	Resistant

Source: ES-202

Table 13
Most Effected Occupations in Recession Resistant and Resilient Industries Worcester Labor Market Area (1974-1977)

Industry	SIC Code	Most Affected Occupations
Drugs	283	Secretaries, Typists, Other Clerical Workers
Miscellaneous Plastice	307	Mechanics, Machinists, Secretaries, Other Clerical Workers
Cutlery, Hardware, Hand Tools	242	Mechanics, Secretaries, Other Clerical Workers
Eating & Drinking Places	581	Bookkeepers, Cook, Food Service Workers
Insurance Agents and Brokers	641	Computer Programmers, Secretaries, Typist, Other Clerical Workers
Personnel Supply Services	736	Secretaries, Typist, Stenographers, Other Clerical Workers
Physicians Offices	801	Medical Laboratory Technologists, X-ray Technicians, Licensed Practical Nurses, Secretaries, Typists, Other Clerical Workers
Dentists Offices	802	Dental Hygienists and Assistants Secretaries, Other Clerical Workers
Hospitals	806	Medical Laboratory Technologists, X-ray Technicians, Licensed Practical Nurses, Secretaries, Typists, Cooks, Food Service Workers, Nurse Aide/Orderlies

V. Recent Unemployment Trends and Projections

A. Unemployment Trends

Since the national recession in 1975 the average annual unemployment rate in the Worcester LMA has been reduced by more than half, from 11.2 percent in 1975 to 5.2 percent in 1980. This swift reversal in the rate is even more surprising when taking into account the fact that over the six year period the labor force grew from 190,400 persons in 1975 to 197,500 in 1980, an increase of 3.7 percent. This increase in the labor force, despite the population remaining relatively stable, is due to demographic, social and economic factors which are occurring throughout the nation. All the children born during the period of the "baby boom" of the late forties and fifties are now in the workforce causing the numbers of persons seeking employment to swell. Also putting expansionary pressures upon the labor force have been the entrance and reentrance of women into the job market since the 1970's. The reasons contributing to large numbers of women seeking employment include greater numbers of selfsupporting women, higher educational attainment levels, and a stronger need to supplement family income that has been eroded by inflation. The sharp drop in the rate of unemployment in the labor market area is even more remarkable in that it occurred during a period when the manufacturing base of the economy was losing jobs. However, the upsurge in nonmanufacturing employment was able to absorb many of those persons who were permanently laid off during the 1975 recession. It is the nonmanufacturing industries, particularly in services and wholesale and retail trade, which are conducive to hiring persons who are entering the job market for the first time or after a prolonged absence. Although some of these jobs may pay only minimum wages they offer the recent high school graduate the opportunity to acquire valuable work experience and future employer references. It is also jobs in the wholesale and retail trades and services subsector which allow many women flexible work schedules required to raise a family and supplement the family income. Comparisons of the Worcester LMA annual average unemployment data with state and national figures show the economic vitality of the area. Only in 1975 did the LMA experience double-digit rates of unemployment and equal the state, while in the five preceding years the Worcester area rate had been considerably less than that of the state. The LMA has also outpaced the national economy in terms of reducing its rate of unemployment. Following four consecutive years of decline since 1976 the national unemployment rate shot-up 5.8 percent in 1979 to 7.1 percent in 1980. A large part of the rise in the national statistics has been due to large scale layoffs and job losses in the automobile and construction industries and amongst producers which supply products and raw material to these industries. A number of factors have insulated the local economy from the economic downturn that the nation experienced in 1980. Employment in the construction industry especially in new home construction has been at a low point since the early seventies. Consequently, downward adjustments in construction payrolls which were seriously affecting other parts of the nation had little effect locally. As already mentioned job losses in manufacturing employment were offset by gains in nonmanufacturing employment.

Table 14 is a comparison and ranking of the eight larger labor market areas in Massachusetts according to annual average unemployment rates between 1975 and 1980. In 1975 all eight labor market areas were experiencing double digit unemployment rates with the New Bedford LMA recording the highest rate of unemployment with 14.0 percent of the persons in the labor force out of work. The Boston area had the lowest rate at 10.5 percent while the Worcester LMA had the seventh lowest rate at 11.2 percent. In 1980 the New Bedford and Fall River LMA's were tied for the highest unemployment rate at 8.1 percent. Both of those areas have been hard hit by the job losses in the textiles and apparel industries due to softness in demand for their products and stiff foreign competitions.

Table 14
Comparison and Ranking of Annual Average Unemployment
Rates for Larger LMA's in Massachusetts Between
1975 and 1980
(In Descending Order)

Labor Market Area	1975 Annual Average Rate	1975 Annual Average Rank	1980 Annual Average Rate	1980 Annual Average Rank
New Bedford	14.0	1	8.1	(tied for first)
Lawrence-Haverhill	13.6	2	6.0	4
Lowell	12.0	3	5.7	5
Brockton	11.7	4	6.8	3
Fall River	11.5	5	8.1	(tied for first)
Springfield-Chicopee-Holyoke	11.3	6	5.5	6
Worcester	11.2	7	5.2	7
Boston	10.5	8	5.0	8

Source: Massachusetts Division of Employment Security Research Department

Table 15
Comparison of Labor Force Data on Annual Average Basis*
1975 - 1980

	Worcester Labor Market Area	Massachusetts	United States
1975			
Labor Force	190.4	2712.0	
Employment	169.1	2410.0	
Unemployment	21.3	302.0	
Rate of Unemployment	11.2	11.2	8.5
1976			
Labor Force	192.5	2742.0	
Employment	175.4	2481.0	
Unemployment	17.1	261.0	
Rate of Unemployment	8.9	9.5	7.7
1977			
Labor Force	190.9	2771.0	
Employment	178.1	2547.0	
Unemployment	12.8	225.0	
Rate of Unemployment	6.7	8.1	7.0
1978			
Labor Force	195.4	2835.0	
Employment	185.7	2662.0	
Unemployment	9.7	173.0	
Rate of Unemployment	5.0	6.1	6.0
1979			
Labor Force	196.6	2891.0	
Employment	187.4	2731.0	
Unemployment	9.2	160.0	
Rate of Unemployment	4.7	5.5	5.8
1980			
Labor Force	197.5	2893.0	
Employment	187.3	2731.0	
Unemployment	10.2	163.0	
Rate of Unemployment	5.2	5.6	7.1

* In Thousands

** Figures are Seasonally Unadjusted

*** Source: Massachusetts Division of Employment Security

Table 16
Monthly Labor Force Data
Worcester LMA
1980

Month	Labor Force	Employment	Unemployment Number	Unemployment Percent
January	193,986	182,929	11,057	5.7
February	194,637	184,642	9,995	5.1
March	195,380	186,126	9,254	4.7
April	194,871	186,085	8,786	4.5
May	195,966	185,864	10,102	5.2
June	196,279	183,942	12,337	6.3
July	196,941	185,898	11,043	5.6
August	197,213	185,726	11,487	5.8
September	198,387	187,245	11,142	5.6
October	202,893	192,254	106,39	5.2
November	202,166	193,796	8,370	4.1
December	203,785	195,635	8,150	4.0

Source: Massachusetts Division of Employment Security, LAUS program

Table 17

Labor Force Statistics
Worcester Labor Market Area
1975 - 1980

	1975	1976	1977	1978	1979	1980
Labor Force	190,400	192,500	190,900	195,400	196,600	197,500
Employment	169,100	175,400	178,100	185,700	187,400	187,300
Unemployment	21,300	17,100	12,800	9,700	9,200	10,200
Unemployment Rate	11.2	8.9	6.7	5.0	4.7	5.2

Source: Massachusetts Division of Employment Security LAUS program

Table 18

Annual Average Labor Force Data For Municipalities in Worcester LMA 1980

Municipality	Labor Force	Employment	Unemployment	Unemployment Rate
Auburn	8,094	7,770	324	4.0
Berlin	1,125	1,069	56	5.0
Boylston	1,503	1,380	123	8.2
Brookfield	1,095	996	99	9.0
Charlton	2,215	2,123	92	4.2
Douglas	1,690	1,573	117	6.9
East Brookfield	1,066	1,028	38	3.6
Grafton	5,734	5,494	240	4.2
Holden	6,511	6,278	233	3.6
Leicester	4,613	4,437	176	3.8
Millbury	6,384	6,060	324	5.1
Northborough	4,526	4,350	176	3.9
Northbridge	6,056	5,638	418	6.9
North Brookfield	2,109	2,010	99	4.7
Oxford	5,221	4,967	254	4.9
Paxton	1,819	1,753	66	3.6
Rutland	1,627	1,556	71	4.4
Shrewsbury	9,974	9,565	409	4.1
Spencer	4,571	4,367	204	4.5
Sterling	2,280	2,198	82	3.6
Sutton	2,397	2,265	132	5.5
Upton	1,926	1,635	291	15.1
Uxbridge	4,527	4,238	289	6.4
Webster	8,501	8,007	494	5.8
Westborough	5,685	5,513	172	3.0
West Boylston	3,514	3,418	96	2.7
Worcester	92,952	87,828	5,124	5.5

Source: Massachusetts Division of Employment Security

B. Characteristics of Insured Unemployed

Tables 19, 20, and 21 describe the characteristics of the insured unemployed in the Worcester LMA, the Job Matching Centers within the LMA, and Worcester CETA Prime Sponsor, respectively. Each table describes by municipality the racial characteristics of individuals receiving unemployment insurance on a continued weeks claim basis. The survey of the continued claimants records was conducted the third week of March 1981. It is not surprising that the city of Worcester has the highest number of minority individual receiving unemployment insurance benefits. Very few minorities from other municipalities within the Labor Market Area were receiving benefits; this reflects the absence of substantial numbers of minorities living in these cities and towns.

Worcester LMA
Comparison of Unemployment Insurance Claims Activity
For First Quarter 1979 and 1980

Activity	1st Qt 1979	1st Qt 1980
Initial Claims	575	5237
Continued Claims	611	5644

Source: Massachusetts Division of Employment Security, Research Department

Table 19

Characteristics of Insured Unemployed
by Place of Residence and by Race
Worcester LMA
March 1981

Town Code	Municipality	Total	White	Nonwhite	Spanish Surname	Other	Not Coded
502	Auburn	144	139	1	1	3	0
263	Berlin	28	27	0	0	1	0
503	Boylston	37	37	0	0	0	0
504	Brookfield	35	34	0	0	1	0
482	Charlton	95	95	0	0	0	0
483	Douglas	68	66	1	0	1	0
505	East Brookfield	27	27	0	0	0	0
506	Grafton	146	144	1	0	1	0
507	Holden	67	67	0	0	0	0
508	Leicester	128	127	0	0	1	0
509	Millbury	190	190	0	0	0	0
269	Northborough	79	79	0	0	0	0
292	Northbridge	199	196	1	0	2	0
512	North Brookfield	58	58	0	0	0	0
485	Oxford	170	169	1	0	0	0
514	Paxton	28	27	0	0	1	0
515	Rutland	31	31	0	0	0	0
516	Shrewsbury	237	232	3	0	2	0
517	Spencer	148	146	0	0	2	0
177	Sterling	49	48	1	0	0	0
488	Sutton	59	59	0	0	0	0
293	Upton	48	48	0	0	0	0
294	Uxbridge	117	116	0	0	1	0
481	Webster	239	236	0	2	1	0
518	Westborough	89	86	1	1	1	0
519	West Boylston	54	53	0	0	1	0
501	Worcester	1,908	1,744	71	82	7	4

Source: Massachusetts Division of Employment Security

Table 20

Characteristics of Insured Unemployed for Cities/Towns Served by the Worcester and Webster Job Matching Centers March 1981

Worcester Office

Town Code	Municipality	Total	White	Nonwhite	Spanish Surname	Other	Not Coded
502	Auburn	144	139	1	1	3	0
503	Boylston	37	37	0	0	0	0
166	Clinton	193	185	2	4	2	0
506	Grafton	146	144	1	0	1	0
507	Holden	67	67	0	0	0	0
170	Lancaster	49	46	0	2	0	1
508	Leicester	128	127	0	0	1	0
509	Millbury	190	190	0	0	0	0
514	Paxton	28	27	0	0	1	0
515	Rutland	31	31	0	0	0	0
516	Shrewsbury	237	232	3	0	2	0
517	Spencer	148	146	0	0	2	0
177	Sterling	49	48	1	0	0	0
519	West Boylston	54	53	0	0	1	0
501	Worcester	1,908	1,744	71	82	7	4

Source: Massachusetts Division of Employment Security

Webster Office

Town Code	Municipality	Total	White	Nonwhite	Spanish Surname	Other	Not Coded
183	Douglas	68	66	1	0	1	0
485	Oxford	170	169	1	0	0	0
488	Sutton	59	59	0	0	0	0
481	Webster	239	236	0	2	1	0

Source: Massachusetts Division of Employment Security

Table 21

Characteristics of Insured Unemployed by Place of Residence and by Race Worcester Prime Sponsor Cities and Towns March 1981

Town Code	Municipality	Total	White	Nonwhite	Spanish Surname	Other	Not Coded
502	Auburn	144	139	1	1	3	0
503	Boylston	37	37	0	0	0	0
506	Grafton	146	144	1	0	1	0
507	Holden	67	67	0	0	0	0
508	Leicester	128	127	0	0	1	0
509	Millbury	190	190	0	0	0	0
269	Northborough	79	79	0	0	0	0
514	Paxton	28	27	0	0	1	0
515	Rutland	31	31	0	0	0	0
516	Shrewsbury	237	232	3	0	2	0
517	Spencer	148	146	0	0	2	0
518	Westborough	89	86	1	1	1	0
519	West Boylston	54	53	0	0	1	0
501	Worcester	1,908	1,744	71	82	7	4

Source: Massachusetts Division of Employment Security

Table 22
Labor Turnover - New Hires
Worcester LMA
1981

Industry	Employment	New Hire Rate	Estimated New Hires
Manufacturing - Total	48,300	1.9	918
Durable Goods Total	32,100	1.1	353
Machinery (except electrical)	11,600	1,7	197
Nondurables Goods Total	16,200	3.5	567
Textile Mill Products	3,900	5.8	226
Leather and Leather Products	2,000	4.8	96
1980			
Manufacturing - Total	48,500	3.2	1,552
Durable Goods Total	31,000	2.6	806
Machinery (except electrical)	8,700	2.3	200
Nondurable Goods Total	17,500	4.2	735
Textile Mill Products	4,200	5.6	235
Leather and Leather Products	2,100	11.1	233

In 1981, the accession rate in total manufacturing employment was less than the separation rate, The exception in the durable goods sector was the accession rate in the primary metals industry and machinery (except electrical). The nondurable goods accession rate continued to be greater than the separation rate.

Table 23

Worcester LMA
Hours & Earnings of Production Workers

Industry	Number of Production Workers	Average Weekly Hours			Average Weekly Earnings		
		Month			Month		
		3/81	2/81	3/80	3/81	2/81	3/80
Manufacturing	48,200	39.7	39.5	39.7	$281.87	$276.50	$256.07
Durable Goods	32,000	40.1	39.8	40.4	307.97	302.48	281.18
Machinery, except elect.	11,500	42.1	41.9	41.5	347.33	341.90	299.22
Nondurable Goods	16,200	39.0	38.8	38.7	234.78	228.53	215.56
Textile Mill Products	4,000	40.0	40.1	40.3	220.40	220.15	204.32

Source: Current Employment Statistics Program (BLS - 790)
Massachusetts Division of Employment Security

VI. Labor Demand and Supply Imbalances

A. Trends in Occupational Demand-March 1981 Versus March 1980

According to the Employment Services Automated Reporting System (ESARS), 14,097 persons had registered for services at the two employment services offices in Worcester and Webster during the first 6 months of Fiscal Year 1981, a period which runs from October 1, 1980 through March 31, 1981. During the previous comparison period for October 1, 1979 through March 31, 1980 13,211 persons registered at the local offices.

For the 14,097 persons registered during the first half of Fiscal Year 1981, there were a total of 4,354 job openings received by the two offices. Of the 4,354 job openings received 3,009 were filled. For the comparison period of Fiscal Year 1979 4,971 job openings orders were received; of these 3,157 were filled.

The narrative and tables in the following sections give a detailed picture of the occupational situation in the Worcester LMA.

Applicant Surplus and High Net Demand Occupations*
Applicant Surplus Occupations

DOT Code	Occupation
201362-030	Secretary
203362-010	Clerk-Typist
209562-010	Clerk, General
211462-010	Cashier
219362-010	Administrative Clerk
279357-054	Salesperson, General Merchandise
318687-010	Kitchen Helper
355674-014	Nurse Aid
920587-018	Packager, Hand
929687-030	Material Handler

High Net Demand Occupations

209562-010	General Clerk
299137-010	Manager, Department

318687-010	**Kitchen Helper**
372667-034	Guard, Security
609685-018	Production Machine Tender
787682-046	Sewing Machine Operator
866381-010	Roofer

* Massachusetts Division of Employment Security
ESARS Employment Service Automated Reporting Service, March 1981

B. High Demand Occupation In Massachusetts - 1981

A report entitled High Demand Occupation in Massachusetts - 1981 was recently prepared and published through a coordinated interagency effort by the Occupational Information Coordinating Committee, Department of Manpower Development, and the Division of Employment Security, under the sponsorship of the Massachusetts Executive Office of Economic Affairs. The report contains information on 50 separate occupations such as a descriptions of typical job duties, working conditions, wages, advancement opportunities and educational or training requirements. The information contained in the report is specifically designed to meet the needs of individuals in Massachusetts who are considering a job or career change or who are responsible for providing guidance on such matters to other individuals. This report is available upon request from the Occupation/Industry Department of the Division of Employment Security.

Employment Developments and Outlook by Occupation
Unfilled and Hard-to-Fill Openings*

Dot Code	
209562-010	General Clerk
211462-010	Cashier
299137-010	Manger, Department
318687-010	Kitchen Helper
355674-014	Nurse Aid
372667-034	Guard, Security
929687-030	Material Handler

* Massachusetts Division of Employment Security
ESARS Employment Service Automated Reporting Service March, 1981

VII. Individuals in Need of Employment Service

Table 24 is a comparison between March 1980 and March 1981 which shows the characteristics of individuals in the active file for employment related assistance and the coinciding percent change in the DES offices within the Worcester LMA. The table is derived from data stored in the Employment Service Automated Reporting System (ESARS). Of the nine demographic and economic characteristics analyzed all but one recorded an increase in applicants served over the March time frame. Services provided the handicapped were down slightly, 2.2 percent. However, all other component characteristics were up a minimum of 25 percent with services provided to high school dropouts and Veterans up by over 46 percent.

The barriers affecting the employment of those who are considered economically disadvantaged are difficult for many to overcome.

These barriers include:

1. Lack of Suitable Job Openings: There may be many job orders listed with the Division of Employment Security Office, but, unfortunately, some of these jobs involve low pay, unattractive working conditions or a need for highly skilled qualifications without any training being offered to allow entry into the field.

2. Lack of Skills: Most of the economically disadvantaged have an employment background in occupations which require very little skill. Therefore, the majority of the economically disadvantaged are competing against one another for many positions of this type, thereby keeping the wage level at a low rate. Another group affected by this barrier to employment are those people making their first entry into the labor force or possibly a reentry after several years away from the labor force.

3. Language Barriers: The inability to communicate effectively in the English language compounds the difficulty in acquiring a meaningful job for many of the economically disadvantaged. There is a definite need for training programs with emphasis on "English as a second language" for those with this particular problem.

4. Age: Age presents another barrier to the economically disadvantaged in the search for suitable work. Those under the age of 22 have a difficult time obtaining a position that offers any upward mobility. In addition, many positions require several months of experience for entry. These factors make it difficult for those under the age of 22 to find a job that will give them any meaningful

experience towards a more secure and better paying job. The age barrier often affects those over 44 years of age also. Even though the law prohibits discrimination because of age many people in the category over 44 years of age find obtaining work extremely difficult due to their age.

5. Day Care Facilities: Single parents, especially women, who are economically disadvantaged, are unable to obtain work because of the lack of suitable day care centers for their children. One of the major considerations a person with responsibility for children has when seeking work is the cost and location of day care service. Many jobs available offer such a low starting wage as to prohibit the single parent from taking the position because the wage will not be sufficient to allow for living expenses plus the cost of day care.

6. Transportation: Many low and middle income residents are unable to obtain work due to the lack of transportation. Some of the work available to these people is outside of the area served by public transportation. Furthermore, many of the night shifts jobs available, which are at a higher rate of pay are unavailable to this segment of the population due to the lack of a suitable method of transportation. The price of gasoline has aggravated the problem.

Table 24
Characteristic of Individuals in the Active File for Employment-Related Assistance
Worcester LMA
March 1980 to March 1981

Characteristic	March 1980	March 1981	Percent Change
Under Age 22	2,301	3,050	32.5
Over Age 44	1,002	1,413	41.0
Female	3,225	4,114	27.6
High School Dropout	2,672	3,917	46.6
Nonwhite	912	1,225	34.3
Spanish American	527	767	45.5
Veteran	893	1,312	46.9
Vietnam Era	340	452	32.9
Handicapped	357	349	-02.2
Economically Disadvantaged	1,390	1,764	26.9

Source: Table 06 ESARS

Table 25

Characteristics of Applicants Registered
at the Job Matching Centers for the Worcester Labor Market Area
March 1981

Office	Total Active Applicants	Female	Economically Disadvantaged	Veteran	Nonwhite Minority	Age Breakdown		Handicapped
						Under 22	Over 45	
Worcester LMA	10,268	4,114	1,764	1,312	1,225	3,050	1,413	349

Source: Table 96 ESARS, March 1981

Table 26

Annual Average Labor Force Data For Municipalities Served by the Worcester Job Matching Centers 1980

Worcester Office

Municipality	Labor Force	Employment	Unemployment	Unemployment Rate
Auburn	8,094	7,770	324	4.0
Boylston	1,503	1,380	123	8.2
Clinton	6,605	6,237	368	5.6
Grafton	5,734	5,494	240	4.2
Holden	6,511	6,278	233	3.6
Lancaster	3,081	2,885	197	6.4
Leicester	4,613	4,437	176	3.8
Millbury	6,384	6,060	324	5.1
Paxton	1,819	1,753	66	3.6
Rutland	1,627	1,556	71	4.4
Shrewsbury	9,974	9,565	409	4.1
Spencer	4,571	4,367	302	4.5
Sterling	2,280	2,198	82	3.6
West Boylston	3,514	3,418	96	2.7
Worcester	92,952	87,828	5,124	5.5

Source: Massachusetts Division of Employment Security

Webster Office

Municipality	Labor Force	Employment	Unemployment	Unemployment Rate
Douglas	1,690	1,573	116	6.9
Oxford	5,221	4,967	254	4.9
Sutton	2,397	2,265	132	5.5
Webster	8,501	8,007	494	5.8

Source: Massachusetts Division of Employment Security

Table 27

Economically Disadvantaged 18 Years and Older
Worcester CETA

	Total	White	Black	Other	Spanish Surname
Worcester CETA	22,569	21,099	591	879	1,047

Source: 1980 Census - Massachusetts (PHC 80-V-23)
Final Population and Housing Unit Count
Lawrence Berkeley Laboratory - Unit of
California FY 1982 Projections

Table 28

Annual Average Labor Force Data for Worcester Prime Sponsor 1980

Town Code	Municipality	Labor Force	Employment	Unemployment	Unemployment Rate
502	Auburn	8,094	7,770	324	4.0
503	Boylston	1,503	1,380	123	8.2
506	Grafton	5,734	5,494	240	4.2
507	Holden	6,511	6,278	233	3.6
508	Leicester	4,613	4,437	176	3.8
509	Millbury	6,384	6,060	324	5.1
269	Northborough	4,526	4,350	176	3.9
514	Paxton	1,819	1,753	66	3.6
515	Rutland	1,627	1,556	71	4.4
516	Shrewsbury	9,974	9,565	409	4.1
517	Spencer	4,571	4,367	204	4.5
518	Westborough	5,685	5,513	172	3.0
519	West Boylston	3,514	3,418	96	2.7
501	Worcester	92,952	87,828	5,124	5.5

Source: Massachusetts Division of Employment Security

VIII. Workforce Training Programs - March 1981

Publicly funded workforce training programs available in the Worcester Labor Market Area in March 1981 included the Work Incentive Program (WIN), The Comprehensive Employment and Training Act Programs (CETA) and Vocational-Technical school programs.

A. The Work Incentive Program (WIN) This program is administered by the Division of Employment Security with referrals by the Welfare Department. The program concentrates on welfare recipients covered by Aid to Families with Dependent Children (AFDC). The WIN program provides employment, training, and social services to welfare clients, rather than a commitment to long term maintenance. It goal is to move men, women and out-of-school youth, age 16 or older from the welfare rolls into meaningful, permanent, employment. The Worcester WIN program administers to the municipalities of Worcester, Auburn, Boylston, Holden, Leicester, Millbury, Paxton, Shrewsbury and Worcester. Cumulative totals on the first half of Fiscal Year 1982 of individuals serviced by category is provided on Table 29

Table 29
Worcester WIN Team
Individuals Serviced
October 1, 1981 - March 31, 1981

Category	Number
Registrants	2,267
New Registrants	771
Appraisals	653
Institutional Training	23
Work Experience	16
Suspense	61
On-the-Job Training	19
Entered Unsubsidized Employment Expected to Last 30 Days or More	222

Source: Massachusetts Division of Employment Security

b. Comprehensive Employment and Training Act (CETA) - March 1981

The Comprehensive Employment and Training Act of 1973 was developed in Washington to establish a new community employment service system to aid persons in job placement as well as providing them with training and other supportive services. There are nine Prime Sponsors, eight of which represent consortia of municipalities based on the following cities: Boston, Cambridge, Fall River, Worcester, Springfield, Lowell, New Bedford, and Brockton, plus a sponsor - the Balance of State.

The Ceta Act of 1973 was implemented in Massachusetts with the purpose of identifying and allotting funds to target groups which are experiencing job-related problems. Some of these target groups are the long-term unemployed, economically disadvantaged, ex-offenders, older workers, persons with a limited knowledge of the English language, and Vietnam-era veterans.

CETA Eligibility Information

Title IIB

Services available under this Title includes: Orientation, Assessment (including Testing), Classroom Occupational Training, On-the-Job Training, Work Experience, Individual Referral to short term public and private vocational training courses and job development. Basic Education, English as a Second Language and GED courses are also available in combination with vocational training, for employability improvement. All of these services are designed to improve the employability of participants within relatively short periods of time. At this time, there are no provisions for remedial education or vocational training courses which would required a great length of time.

Eligibility

Applicants must be:

1. Economically disadvantaged and unemployed or underemployed and a member of a significant segment.
2. Willing and able to participate in ES/CETA services/programs.
3. Lacking a marketable skill.

New Training Program Development - Bay State Skills Commission (BSSC)

Governor King announced in the early fall of 1980 that Oxford had been designated as one of BSSC job training centers in the state. The center will train up to 110 people each year. Those to be trained will be primarily unemployed, underemployed and economically disadvantaged. The center is expected to be located in the Oxford Public Schools and is anticipated to open sometime in early 1981. About $20,000 will be made available through EEA to develop a High Technology Training Center Complex.

C. Technical High School

The four technical high schools which serve South-Central Massachusetts are the Worcester Vocational Technical High School (in Marlboro), Blackstone Valley Regional High School (in Upton) and Bay Path Vocational High School (in Charlton).

APPENDIX

Employment in Establishment Subject to the Massachusetts Employment Security Law
By Major Industry Division for Municipalities in Worcester L.M.A.
1979

Municipality	Major Industry Division							
	Agriculture Forestry Fisheries	Mining	Contract Construction	Manufacturing	Transp. Comm. Utilities	Wholesale Retail Trade	Finance Insurance Real Estate	Services
Worcester	123	0	2,149	29,196	3,441	22,392	7,470	23,490
Auburn	4	2	328	899	35	3,249	145	622
Berlin	26	0	21	14	0	73	0	74
Boylston	44	0	166	93	54	251	3	37
Brookfield	15	0	11	293	17	80	0	9
Charlton	8	0	38	178	9	292	4	153
Clinton*	0	0	125	3,203	134	658	117	626
Douglas	0	0	26	603	19	20	3	35
East Brookfield	0	0	5	505	8	34	0	26
Grafton	9	0	97	1,728	103	574	70	219
Holden	61	11	182	1,090	134	682	70	663
Lancaster*								
Leicester	12	0	44	378	67	281	18	161
Millbury	1	0	98	1,295	129	456	75	245
Northborough	24	9	134	838	76	1,241	48	3322
Northbridge	2	0	108	1,499	29	602	127	753
North Brookfield	149	9	18	402	21	89	33	74
Oxford	6	8	87	415	12	196	24	182
Paxton	2	0	29	10	34	143	28	177
Rutland	29	0	37	127	1	80	3	127
Shrewsbury	64	9	543	785	285	2,012	208	1,006
Spencer	12	0	114	511	30	506	62	203
Sterling	159	9	63	169	68	168	8	29
Sutton	0	6	94	445	96	95	4	76
Upton	0	0	36	53	50	126	0	79

Employment in Establishment Subject to the Massachusetts Employment Security Law
By Major Industry Division for Municipalities in Worcester L.M.A.
1979
(Continued)

Municipality	Major Industry Division							
	Agriculture Forestry Fisheries	Mining	Contract Construction	Manufacturing	Transp. Comm. Utilities	Wholesale Retail Trade	Finance Insurance Real Estate	Services
Uxbridge	8	0	46	960	206	392	27	155
Webster	4	9	156	2,645	129	998	222	1,021
Westborough	42	0	124	2,443	1,767	1,855	165	308
West Boylston	3	0	163	1,174	15	444	26	242

* Not in LMA but included in Job Matching Service Centers

** Source: Massachusetts Division of Employment Security

Employment in Establishments Subject to the Massachusetts Employment Security Law By Major Industry Division for Municipalities in Worcester Prime Sponsor

1979

Municipality	Major Industry Division							
	Agriculture Forestry Fisheries	Mining	Contract Construction	Manufacturing	Transp. Comm. Utilities	Wholesale Retail Trade	Finance Insurance Real Estate	Services
Worcester	123	0	2,149	29,196	3,441	22,392	7,470	23,490
Auburn	4	2	328	899	35	3,249	145	622
Boylston	44	0	166	93	54	251	3	37
Grafton	9	0	97	1,728	103	574	70	219
Holden	61	11	182	1,090	134	682	70	663
Leicester	12	0	44	378	67	281	18	161
Millbury	1	0	98	1,295	129	456	75	245
Northborough	24	9	134	838	76	1,241	48	322
Paxton	2	0	29	10	34	143	28	177
Rutland	29	0	37	127	1	80	3	127
Shrewsbury	64	9	543	785	285	2,012	208	1,006
Spencer	12	0	114	511	30	506	62	203
Westborough	42	0	124	2,443	1,767	1,855	165	308
West Boylston	3	0	163	1,174	15	444	26	242

Source: Massachusetts Division of Employment Security

TABLE 10 - ALL JOB OPENINGS 03/31/81 MASSACHUSETTS SMSA 9240 TABLE 10
OPENINGS RECEIVED AND FILLED BY INDUSTRIAL DIVISION AND OCCUPATIONAL CATEGORY

ITEM NO	OCCUPATIONAL CATEGORIES AND DIVISIONS	OPENINGS BY INDUSTRIAL DIVISION										
		TOTAL	AGR FOR & FISH	MINING	CONSTR	MFG	TRANSP & UTIL	WHS & RETAIL TRADE	FINANCE INS & REAL ESTATE	SERVICES	PUBLIC ADMIN-ISTRATION	GOVT
A	B	C	D	E	F	G	H	I	J	K	L	M
	OPENINGS RECEIVED											
10010	TOTAL	4354	33	0	125	1019	265	1411	140	970	391	407
10015	0-1 PROF TECH MGR	315	0	0	1	66	7	24	24	116	77	80
10020	20-24 CLERICAL	1041	0	0	11	58	11	314	100	320	227	234
10025	25-29 SALES	519	0	0	0	6	0	493	5	14	1	0
10030	30 DOMESTIC	31	0	0	0	1	0	0	0	29	1	1
10035	31-39 OTHER SERVICES	629	0	0	2	20	4	230	4	349	20	32
10040	4 FARM F & F	85	27	0	1	0	0	0	2	46	9	6
10045	5 PROCESSING	104	0	0	0	96	0	7	0	1	0	0
10050	6 MACHINE TRADES	280	0	0	0	233	5	20	0	22	0	0
10055	7 BENCH WORK	220	0	0	0	199	0	5	0	16	0	1
10060	8 STRUCTURAL	187	0	0	70	30	1	6	4	26	50	47
10065	90-91 MOTOR FRGT, TRANSP	132	1	0	4	9	62	48	0	6	2	1
10070	92 PKG MTRL HNDL	805	5	0	36	299	175	264	0	23	3	3
10075	93-97 OTHER	6	0	0	0	2	0	0	1	2	1	2
	OPENINGS FILLED											
10085	TOTAL	3009	33	0	105	720	126	1121	62	577	265	274
10090	0-1 PROF TECH MGR	116	0	0	1	31	1	12	0	31	40	40
10095	20-24 CLERICAL	734	0	0	5	33	3	245	51	218	179	181
10100	25-29 SALES	428	0	0	0	2	1	414	6	4	1	0
10105	30 DOMESTIC	12	0	0	0	0	0	0	0	12	0	0
10110	31-39 OTHER SERVICES	454	0	0	2	13	3	180	1	249	6	19
10115	4 FARM F & F	37	28	0	1	0	0	0	2	1	5	4
10120	5 PROCESSING	77	0	0	0	73	0	4	0	0	0	0
10125	6 MACHINE TRADES	180	0	0	0	150	7	11	0	12	0	0
10130	7 BENCH WORK	138	0	0	0	124	0	2	0	12	0	1
10135	8 STRUCTURAL	135	0	0	55	31	1	5	2	13	28	24
10140	90-91 MOTOR FRGT, TRANSP	81	1	0	5	4	31	36	0	2	2	1
10145	92 PKG MTRL HNDL	615	4	0	36	258	79	212	0	23	3	3
10150	93-97 OTHER	2	0	0	0	1	0	0	0	0	1	1
	FILL RATE											
10160	TOTAL	69.1	100.0	0.0	84.0	70.7	47.5	79.4	44.3	59.5	67.8	67.3
10165	0-1 PROF TECH MGR	36.8	0.0	0.0	100.0	47.0	14.3	50.0	0.0	26.7	51.9	50.0
10170	20-24 CLERICAL	70.5	0.0	0.0	45.5	56.9	27.3	78.0	51.0	68.1	78.9	77.4
10175	25-29 SALES	82.5	0.0	0.0	0.0	33.3	0.0	84.0	120.0	28.6	100.0	0.0
10180	30 DOMESTIC	38.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	0.0
10185	31-39 OTHER SERVICES	72.2	0.0	0.0	100.0	65.0	75.0	78.3	25.0	71.3	30.0	59.4

TABLE 10 - ALL JOB OPENINGS 03/31/81 MASSACHUSETTS SMSA 9240 TABLE 10
OPENINGS RECEIVED AND FILLED BY INDUSTRIAL DIVISION AND OCCUPATIONAL CATEGORY

ITEM NO	OCCUPATIONAL CATEGORIES AND DIVISIONS	OPENINGS BY INDUSTRIAL DIVISION										
		TOTAL	AGR FOR & FISH	MINING	CONSTR	MFG	TRANSP & UTIL	WHS & RETAIL TRADE	FINANCE INS & REAL ESTATE	SER-VICES	PUBLIC ADMIN-ISTRA-TION	GOVT
A	B	C	D	E	F	G	H	I	J	K	L	M
10190 4	FARM F & F	43.5	103.7	0.0	100.0	0.0	0.0	0.0	100.0	2.2	55.6	66.7
10195 5	PROCESSING	74.0	0.0	0.0	0.0	76.0	0.0	57.1	0.0	0.0	0.0	0.0
10200 6	MACHINE TRADES	64.3	0.0	0.0	0.0	64.4	140.0	55.0	0.0	54.5	0.0	0.0
10205 7	BENCH WORK	62.7	0.0	0.0	0.0	62.3	0.0	40.0	0.0	75.0	0.0	100.0
10210 8	STRUCTURAL	72.2	0.0	0.0	78.6	103.3	100.0	83.3	50.0	50.0	56.0	51.1
10215 90-91	MOTOR FRGT, TRANSP	61.4	100.0	0.0	125.0	44.4	50.0	75.0	0.0	33.3	100.0	100.0
10220 92	PKG MTRL HNDL	76.4	80.0	0.0	100.0	86.3	45.1	80.3	0.0	100.0	100.0	100.0
10225 93-97	OTHER	33.3	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	100.0	50.0

SMSA 9240 MONTHLY YEAR TO DATE
FOR PERIOD ENDING 03/31/81 PAGE 002

TABLE B07 03/31/81 MASSACHUSETTS SMSA 6320

JOB OPENINGS RECEIVED AND FILLED BY OCCUPATIONAL CATEGORY AND HOURLY WAGE RATE

TABLE B07

ITEM NO		ITEM	TOTAL NONAG AND AG.	UNDER $3.10	$3.10- $3.34	$3.35- $3.49	$3.50- $3.99	$4.00- $4.49	$4.50- $4.99	$5.00- $5.49	$5.50- $5.99	$6.00 & OVER	AVERAGE	OTHER*
A		B	C	D	E	F	G	H	I	J	K	L	M	N
		OPENINGS RECEIVED												
B07010	TOTAL		1021	16	238	222	157	125	56	66	66	68	4.09	7
B07015	0-1	PROF TECH MGR	81	0	2	5	7	13	10	12	2	27	5.67	3
B07020	20-24	CLERICAL	140	0	25	28	53	20	10	1	0	2	3.68	1
B07025	25-29	SALES	76	0	24	24	21	2	1	2	1	1	3.52	0
B07030	30	DOMESTIC	9	0	3	2	2	1	0	0	0	1	4.75	0
B07035	31-39	OTHER SERV	191	14	74	60	16	12	8	3	1	1	3.35	2
B07040	4	FARM F & F	113	0	14	77	2	4	1	0	0	15	4.10	0
B07045	5	PROCESSING	14	2	1	2	4	4	0	0	0	1	3.66	0
B07050	6	MACHINE TRADES	114	0	2	2	17	25	12	18	28	10	5.02	0
B07055	7	BENCH WORK	115	0	73	11	10	20	0	1	0	0	3.40	0
B07060	8	STRUCTURAL	65	0	8	2	12	12	4	16	2	9	4.68	0
B07065	90-91	MOTOR FRGT, TRANSP	36	0	5	6	6	3	4	10	1	0	4.11	1
07070	92	PKG MTRL HNDL	58	0	7	3	7	8	4	0	28	1	4.83	0
07075	93-97	OTHER	9	0	0	0	0	1	2	3	3	0	4.98	0
		OPENINGS FILLED												
07085	TOTAL		652	9	208	92	115	75	36	43	52	18	3.90	4
07090	0-1	PROF TECH MGR	29	0	2	5	5	3	4	2	0	8	4.78	0
07095	20-24	CLERICAL	86	0	15	15	36	12	6	1	0	0	3.65	1
07100	25-29	SALES	63	0	22	15	22	2	1	1	0	0	3.42	0
07105	30	DOMESTIC	9	0	3	2	2	1	0	0	0	1	4.75	0
07110	31-39	OTHER SERV	125	8	56	30	12	8	7	2	0	0	3.34	2
07115	4	FARM F & F	19	0	15	1	1	1	1	0	0	0	3.28	0
07120	5	PROCESSING	10	1	1	2	3	3	0	0	0	0	3.52	0
07125	6	MACHINE TRADES	71	0	2	2	11	9	6	12	24	5	4.96	0
07130	7	BENCH WORK	111	0	75	12	5	18	0	1	0	0	3.37	0
07135	8	STRUCTURAL	36	0	6	1	9	8	2	6	1	3	4.47	0
07140	90-91	MOTOR FRGT, TRANSP	24	0	4	4	3	1	3	7	1	0	4.12	1
07145	92	PKG MTRL HNDL	54	0	7	3	6	8	4	0	25	1	4.80	0
07150	93-97	OTHER	15	0	0	0	0	1	2	11	1	0	4.91	0

OTHER INCLUDES WAGES NOT PAID ON A TIME BASIS.

MSA 6320

MONTHLY YEAR TO DATE
FOR PERIOD ENDING 03/31/81 PAGE 001

[illegible]

ACME
BOOKBINDING CO., INC.

OCT 5 1990

100 CAMBRIDGE STREET
CHARLESTOWN, MASS.